REPEATER JOURNAL

NATIONAL AWARD WINNER

CAROLINAS - VIRGINIA REPEATER ASSN. INC

MAY, 1979 ORGANIZED 1971 VOLUME 8, NO. 2

REPRESENTING UHF-VHF INTERESTS THROUGHOUT
NORTH CAROLINA, SOUTH CAROLINA & VIRGINIA

"IN OUR 8th YEAR"

WELCOME
METROLINA HAMFEST
MAR 24 - 9AM - 6PM
MAR 25 - 8AM - 5PM
SHOW USE TRADE ST

GET WITH THE WINNER!

THE AWARD WINNING CVRA REPEATER JOURNAL

1978 ARNS National Winner In Its Class of Publications

"CVRA—ONE OF THE TOP FOUR REPEATER COUNCILS IN THE NATION"

—American Radio Relay League

FOUR TIMES A YEAR FOR ONLY $3.00

HERE'S WHAT YOU GET (FEB., MAY, AUG., NOV.)

- Updated Computerized Repeater Listings
- Distribution of Repeaters By Frequency
- Technical Tips & Articles
- Hard-Hitting Editorials
- Up-To-Date News About Repeaters, Clubs, Equipment
- Club Calendars
- Net Registers
- Hamfest Schedules
- And Much More

THE JOURNAL COVERS UHF-VHF INTERESTS THROUGHOUT THE CAROLINAS, VIRGINIA AND EAST TENNESSEE

THE MOST ACCURATE AND COMPREHENSIVE COMPUTERIZED REPEATER LISTINGS AVAILABLE

JOIN MORE THAN 3,000 READERS WHO TAKE THEIR AMATEUR NEWS SERIOUSLY!

BECOME A CVRA ASSOCIATE MEMBER TODAY!
GET THE JOURNAL FREE FOR 1 YEAR

THE REPEATER JOURNAL

ONE YEAR ONLY $3.00

BE AN INFORMED AMATEUR! TRY THE JOURNAL

**The CVRA Journal was Rated the Most Outstanding Publication in its Class By Amateur Radio News Service in 1978 Competition. CVRA—Rated Among Top Four Councils in U.S. by ARRL*

REPEATER JOURNAL

CAROLINAS - VIRGINIA REPEATER ASSN. INC

MAY, 1979 "IN OUR 8th YEAR" VOLUME 8, NO. 2

ORGANIZED 1971

JOURNAL STAFF

EDITOR & PUBLISHER
Wayne C. Williams K4MOB
Route 1, Box 806
Colfax, N.C. 27235
(919) 993-5881

TECHNICAL EDITOR
Watson Gabriel WB4EXW
5939 Timberwood Trail
Kernersville, N.C. 27284
(919) 993-3110

CONTRIBUTING EDITOR
Michael K. Williams WA4JIY
123 Grandin Court
Danville, Va. 24541
(804) 793-8302

ADV. & SALES MGR.
Ken Holliday WA4DYY
1923 Halifax Court
High Point, N.C. 27260
(919) 454-4845

CIRCULATION MGR.
Lindsay Cleveland W4IZI
P.O. Box 3325
Burlington, N.C. 27215
(919) 226-1507

PRINTING OF JOURNAL
Golden Triangle Pr. Co.
1006 N. Raleigh St.
Greensboro, N.C. 27401
(919) 273-8221

ON THE COVER

A familiar scene at ham-fests as people gather for the prize-drawing. This shot at the Charlotte Hamfest, ctsy. of Robert S. Drake, W4MHF of Charlotte, N.C.

EDITORIAL COMMENT

WEATHER AND AMATEUR RADIO

We often hear the phrase "It can't happen around here". I guess the folks in Wichita Falls, Texas and other places who were hard hit with tornados probably said the same things once. But they know better now.

The Carolinas and Virginia have been quite fortunate over the past years — no killing tornadoes and no terrible hurricanes. Maybe we've been lucky. I wonder if our luck will hold forever.

We as an Amateur community can do lots in the way of preparing our neighbors for bad storms, whether they be an electrical storm, or a killer hurricane or tornado.

Some Amateur Civil Preparedness groups have organized and worked up a plan to assist and work with local weather stations. Amateurs are in the field reporting back to a net control located at the weather bureau, storm conditions,

Continued On Page 12

NO ONE TO BLAME BUT . . .

Once in a Blue Moon, I get letters from Anateurs who are all fired up and mad at the CVRA because of something that was done or not done as a result of a request, promise or suggestion. Generally these problems are involving previous experiences with frequency coordination, interference complaints or just lack of communication.

Often these complaints may be toward the CVRA as a result of a personality conflict with a former Director or Officer of the CVRA.

Since I took the job as Publications Chairman for the CVRA, I have repeatedly spoken of communicating, getting along, working with and cooperating with other Amateurs in clubs, repeater groups and the CVRA.

Sometimes I find a person doesn't renew his full membership, or never joins the CVRA initially just because he is mad at someone he dealt with through

Continued On Page 33

"The REPEATER JOURNAL" is published four times each year in the months of February, May, August, and November, for members of the Carolinas-Virginia Repeater Association. Permission is granted for quoting from the "REPEATER JOURNAL" provided credit is given. The CVRA will swap newsletters with other Repeater Councils and News Organizations on request. The "REPEATER JOURNAL" has a circulation of 3,500 copies and is entered as Third Class Mail at the Post Office in Burlington, N.C. 27215. The CVRA mailing address is: CVRA, P.O. Box 3325, Burlington, N.C. 27215.

TABLE OF CONTENTS

Editorial Comments (Weather & No One To Blame) 1
Taking A Moment (From The President) 3
Hamfests Off and Running - CVRA Journal May Cover Story 7
Teknikle Topix (Your SWR is 1.05 to 1? Oh, come now!!) 11
VHF Net Register (NC, SC & VA) 14
South Carolina, Tennessee State News Items 19
Virginia State News Items 21
North Carolina State News Items 22
Distribution of Repeaters by Frequency Lists 23
CVRA Repeater Index (NC, SC, VA) Also TENN. 24-26
Now, The Rush Begins 28
Club Meeting Calendar (NC, SC, VA) 29-30
NRAO Meets With Amateurs Concerning Quiet Zone 32
Repeater Listings of Frequency Coordinator and Journal Consolidated 37
ARRL-CVRA Membership Percentage Up 37
Eliminating Adjacent Channel Interference 43
Calendar Of Coming Events (Hamfest Schedule for 1979) 47
FCC Examination Schedule for Fifth District 47
Classified Advertising & Advertisers Index 48

NEWS & AD DEADLINE FOR AUGUST JOURNAL - JULY 1, 1979

CVRA OFFICERS AND COMMITTEE MEMBERS

PRESIDENT
Charles Durst WA4WTX
5508 Hallmark Road
Durham, N.C. 27712
(919) 471-8721

VICE PRESIDENT
John Fried W4WWD
Route 5, Box 112-C
Farmville, Va. 23901
(804) 392-6405

SECRETARY
Paul G. Marsha K4AVU
3551 Lakeland Dr.
Columbia, S.C. 29204
(803) 786-0842

TREASURER
Carl Smith N4AA
P.O. Box 6843
Asheville, N.C. 28806
(704) 683-3130

FREQ. COORDINATING CHM.
Al T. Ross, K4CAW
2404 Springwood Dr.
Greensboro, N.C. 27403
(919) 292-3105

FCC LIAISON COMM.
Cecil Oliver, WA4VQC, Chrm
5644 Anthony Road
Virginia Beach, Va. 23455
(804) 464-3892

James Menefee, jr. WA4KKY
55 Flint Ridge
Hillsborough, N.C. 27278
(919) 732-7863

STATE FREQ. COORD.
VA. - Carter Cogle
N.C. - Ken Woodard
S.C. - Jack Watson
Addresses on Back

TECH. ADVISOR COM.
Danny Hampton, K4ITL
550 Granite Street
Raleigh, N.C. 27608
(919) 832-8733

REPEATER MEMBERSHIP
Bill Page WB4LWX
P.O. Box 871
Kinston, N.C. 28501
(919) 523 1718

STATE DIRECTORS AND ASSISTANTS ARE LISTED ON BACK COVER

ASSOCIATE MEMBERSHIP COMMITTEE

Lindsay Cleveland, W4IZI
P.O. Box 3325
Burlington, N.C. 27215
(919) 226-1507

Lane Tarleton, WA4ZQQ
105 Hickory Knob Ct.
Fort Mill, S.C. 29715
(803) 547-2618

Larry McLaurin, WB4VJE
1114 Wiley Lewis Road
Greensboro, N.C. 27406
(919) 273-3112

Ann Young, Secty.
427 West Davis St.
Burlington, N.C. 27215

TAKING A MOMENT FOR REFLECTION AND THANKS

-by Charles Durst, WA4WTX
President, CVRA

From time to time it is appropriate that we, as an organization, pat ourselves on the back and brag a bit for all to hear on the repeater or read in the Journal. The CVRA has enjoyed great success in a number of areas and those responsible for that success should be commended.

The CVRA is a very strong organization which represents a vast majority of the hams in the Carolinas and Virginia who are on VHF-FM. The ones to be commended in this are the Associate and Full members themselves, numbering over 2,500 strong, which enjoy Amateur Radio in a spirit of harmony and cooperation. The organization is able to accomplish far more because it does not have to spend time settling petty squabbles or playing politics. Time can be devoted to membership, frequency coordination, The REPEATER JOURNAL, FCC Liaison, and Technical matters.

The REPEATER JOURNAL deserves the highest praise. Wayne, K4MOB, and his staff put together one of the finest publications around. In recognition of this excellence in journalism, the Amateur Radio News Service recently judged the REPEATER JOURNAL number one in Amateur Publications with circulations over 1,000 copies per issue. Hundreds of man hours go into the writing, advertising, editing, and distribution of the REPEATER JOURNAL. None of the Journal Staff receives any pay for their efforts on the Journal. It is done on a voluntary basis as a service to the membership of CVRA. To the REPEATER JOURNAL staff, I say "Thanks for a job well done - keep up the good work."

The Association is well-served by its membership committees. Lindsay, W4IZI, and his Associate Membership Committee members perform a monumental task in keeping up with over 2,500 members and a Journal circulation of over 3,500 copies. Bill, WB4LWX keeps up with the Full Repeater Members. These folks have done these jobs for a number of years with a great sacrifice of their own time. Their efforts are truly appreciated.

One of the other accomplishments of the CVRA is in the area of frequency coordination. Al, K4CAW, assisted primarily by the State directors, does a tremendous job coordinating frequencies for all of the new repeaters. This job, like all the others, takes a great deal of time and pays nothing. For all who have been involved in frequency coordination, the reward is in knowing that interference is minimized by the efforts in coordination. CVRA is very fortunate in having had very few conflicts over frequency usage. I attribute this primarily to the fact that we have a fine group of Amateurs that are willing to work together.

Our efforts and success have not gone unnoticed. The ARRL has recognized the CVRA as one of the top repeater organizations in the country. Three out of four representatives to the VHF Repeater Advisory Comnmittee (VRAC) for the fourth call area have come from the CVRA. Our neighbors in adjoining States have also observed our success. There has been discussion on affiliations with groups in Tennessee, D.C., Georgia and Florida. An organization of that size could have considerable clout in FCC or other regulatory matters.

The CVRA has a strong nucleus of hard workers that has "made things happen." What, then ,does the Association need to continue its success? Volunteers from the Associate and Full members are needed to work on committees and run for office.

Check with your officers, Directors, or Committee Chairmen and volunteer to help. With more participation, even greater things can be accomplished within CVRA.

JOURNAL PLACES FIRST NATIONWIDE IN ITS CLASS

The CVRA Journal won top honors in its class of publication nationwide in the 1978 annual Amateur Radio News Service contest.

The August, November, 1977 and February, May 1978 issues of the Journal were entered in the contest, open to all publications and newsletters published in the U.S., Canada and England.

In winning the top honor for the 1,000 and over multi-club class, the President of CVRA, Charles Durst received an attractive Certificate, and the Editor of the Journal, Wayne C. Williams, K4MOB, received a years free membership in ARNS.

Other winners in the contest included: Multi-club, under 1,000 "Mobile News" G3FPK, Editor and "220 Notes", W9IWI, Editor, sharing dual honors.

The "Salami Merchant," W8WKY, editor, won the single club newsletter under 100 copies award with "QCC News", W9MOL, Editor, leading in the 100-199 copies catagory. "QUA", WB9CFE, editor, topped the 200-299 group, "Carrier", W6CU, editor, led the 300-399 issue class. Winning in the over 400 category was the "AMSAT Newsletter", G3ZCZ/W3 Editor.

HAVE YOU WISHED YOU COULD FIND MIDLAND? NOW YOU CAN!!!

WILLIAMS RADIO PROUDLY ANNOUNCES ITS NEW ASSOCIATION WITH MIDLAND

WILLIAMS IS 4 YEARS AHEAD OF ALL THE OTHER DEALERS IN 220 EXPERIENCE!

Get into "220" Mobile the Easy Way with Midland

MIDLAND 13-509
220 MHZ 12-CHANNEL
10 WATT XCVR.

REGULAR LIST $179.00

SPECIAL **$159.00**

Includes Mobile Bracket and Microphone.

CRYSTALS FOR ALL 220 MHZ REPEATERS . . . $8.00/PAIR

THE FABULOUS MIDLANDS AT OUR BOOTH AT MOST AREA HAMFESTS!

MIDLAND INTERNATIONAL

MIDLAND 13-513 220 SYNTHESIZED
220-225 MHZ. TRANSCEIVER List $459 . . . . . $389.00

WILLIAMS RADIO SALES

NORTH CAROLINA
WAYNE C. WILLIAMS K4MOB
RT. 1, BOX 806, COLFAX, N. C. 27235
PHONE (919) 993-5881 AFT. 5 P.M. AND WEEKENDS

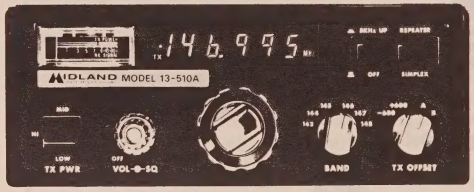
"The Crystal Company"

WILLIAMS HAS MIDLAND!!!

WE'VE GOT THE 2-METER OR 220 MHZ. RADIO TO FILL YOUR VHF NEEDS

Midland's 13-510 Is One Great 2-Meter Mobile.

Our 13-510A Is Even Better!



NEW! The 13-510A P.L.L. synthesizer delivers 1,200 frequencies between 143.00 and 149.00 MHz . . . the full 2-meter band, plus MARS.

NEW! The 13-510A will operate with up to a 6 MHz split between TX and RX frequencies.

NEW! The 13-510A microphone connector is pre-wired for your Touch-Tone* encoding microphone.

NEW! The 13-510A has a 7-pin accessory connector for your Touch-Tone* dial, tone-burst generator or discriminator meter. *Touch-Tone is a registered trademark of AT&T

NEW! The 13-510A is compatible with available popular CTCSS continuous tone-coded squelch system accessories.

NEW! The 13-510A has 3 transmitter outputs: 1, 10 and 25 watts.

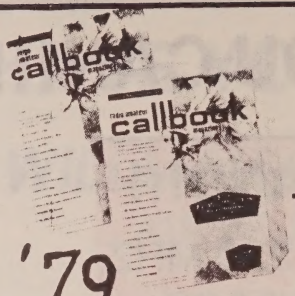
REGULAR LIST $449.00
INTRODUCTORY PRICE **$369.00**

POWER SUPPLIES FOR YOUR MIDLAND . . . IN STOCK
BEAMS AND ANTENNAS FOR YOUR MIDLAND . . . IN STOCK
CALL TODAY . . . WE SHIP UPS

WE DON'T JUST SELL YOU A BOX . . . ASK ABOUT OUR SPECIAL WARRANTY

WILLIAMS RADIO SALES

143-149 Mhz. 1200 Channels
1-10 & 25 Watt Switch Positions



'79

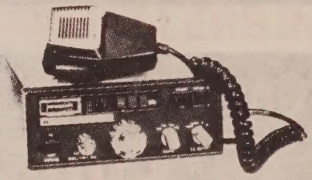
THE BIG SIGNAL
UNADILLA
"W2AU" BALUN

THE OLD RELIABLE
REYCO
"W2VS" ANTENNA COILS

THE HAM-KEY
NOW 5 MODELS

SWAN
ELECTRONICS
A subsidiary of Cubic Corporation

There's nothing like it!



MIDLAND 13-510

There is no substitute
the hy-gain
Amateur Radio Systems

RADIOAMATEUR callbook

philmore

The ALLIANCE

AMECO

KDK FM 2015R
2 Meter
Synthesized
Transceiver
In Stock

Mosley

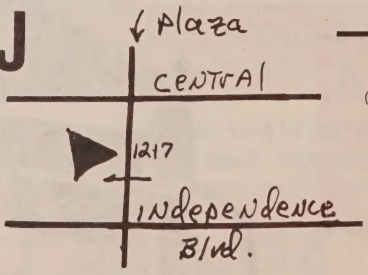
Taylor Radio

Reconditioned Equipment

SERVICE??
NO PROBLEM!
It's OUR Policy.

Wilson

MFJ



(704) 334-7974

Larsen

Home-Tronics
HAM, CB, STEREO, SALES WITH SERVICE

AMECO Publications
ARRL Publications

VISA
master charge

JOHN S. DAVIS
WB4KOH
Owner

1217 The Plaza
Charlotte, N.C. 28205

HAMFESTS OFF AND RUNNING — MOST WELL ATTENDED

-by Wayne C. Williams, K4MOB

For some people the first hamfest of the season is around the corner. For others, the season is well under way. We started off with the Richmond Frost-Fest in January this year. Believe it or not, it didn't snow and Sunday afternoon was actually quite warm and springlike. Attendance at Richmond (Va.) was good this year, slightly more than last.

In February we went to the Elkin (N.C.) formerly the Hillsville (Va.) Hamfest. Again, no snow or bad weather that weekend as had been the occasion the past 2 years. Elkin was jammed with people. The new building the Briarpatch club got was larger than the one at Hillsville, but it was still quite crowded with attending hams.

March hit us with two hamfests. First there was Greenville, S.C., the State ARRL convention and Hamfest. We didn't go down until Saturday afternoon. The drive was pleasant, quite warm, and I caught cold opening up vents and windows on the truck. Greenville was well attended, the banquet was a success Saturday night and Sunday, most meetings were well attended.

The Charlotte Metroliner Hamfest came a week later. It has gotten B-I-G. Over 5 to 7 thousand attended the two-day event. The FCC examination rooms were glutted with eager hams wishing to take exams. The Civic Center floor was well filled with hams looking over the goodies.

By the time you read this, I probably will have attended a couple more hamfests. The Raleigh (N.C.) RARS Hamfest coming along in April, and the biggie of the year, the Dayton Hamvention. (I don't plan attending that one.)

In early May as you get your Journal the Gastonia (N.C.) group will be putting on their Hamfest the weekend of the sixth. It's being held at the Ashbrook High School. Good prizes, hourly drawings and rest areas are being provided.

On May 12 & 13, The Columbia ARS will sponsor their hamfest in Columbia, S.C. Lots of nice prizes will be given away at the 2-day event. Flea market and dealer booths will be brimming with lots of goodies for the ham who is looking for something to buy.

The next weekend, Durham will hold their annual DFMA DurhamFest on the 19th & 20th. The event will be held at South Square Mall in Durham, N.C. The fest will run for two days under the covered area of the Mall parking deck. Flea market, dealers, and lots of prizes and several demonstrations and seminars are on the program. Bingo will be featured for the ladies on Sunday. Plenty of shopping time Saturday.

Also in May on the 26th and 27th, the RAC of Knoxville, Tenn. will hold their Knoxville Hamfest and Tennessee Section Convention. The event will be held at the Jacob Building at Knoxville's Chilhowee Park, allowing a large indoor tailgate flea market, and a good array of dealer booths. For the family, Chilhowee Park is home of a fine amusement park and the Knoxville Zoo. Forums, code proficiency certificates, and FCC examinations on Saturday morning, are other plans for the hamfest.

In June, we note only one hamfest in CVRA territory. On the 3rd, the Manassas Virginia Hamfest will be held on Sunday at the Fairgrounds just outside Manassas. Previous years attendance was very good. This year will probably be the same as lots of DC, Maryland and others join their Virginia neighbors. Lots of nice prizes will be awarded at the open pavillian again this year. Tailgaters will be in open fairgrounds area, dealer booths in exhibit buildings.

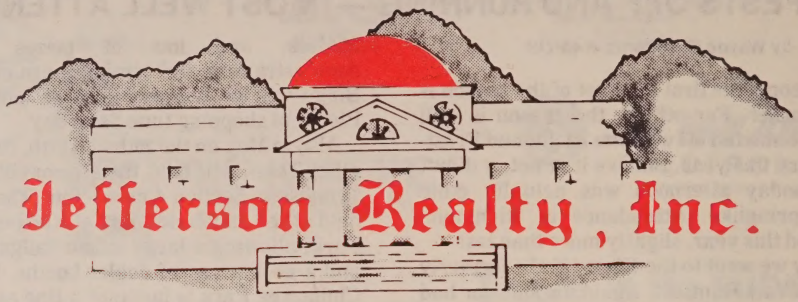
The Atlanta Hamfest is also scheduled in June on the 16th and 17th. This very large Georgia event is sure to draw many hams from CVRA territory as well as others southward. Many manufacturer and dealer booths will be available as well as large tailgater section.

We've got two hamfests on the agenda in July. On the 21st the annual Cary, N.C. Swapfest will be held at the Cary Lion's Club Shelter next to the High School. This event in its 7th year is a nice one to take it easy, rest, and meet with your friends, after doing some buying and selling. Fleamarket, auction, prizes will be featured.

On the next weekend, festivities shift to Charleston, S.C. for the Charleston ARS hamfest on the 28th and 29th. It will be held in the nicely air conditioned Gaillard Municipal Auditorium building. FCC examinations will be given Saturday morning at the college of Charleston, with the famous Charleston Hospitality night on Saturday night. Lots of prizes, fleamarketers and dealers, all inside. (Editors note: Last year it was 105 outside, 74 degrees inside where we were)

We might note that the West Virginia State ARRL convention will be held on July 1st, and the National

Continued On Page 45



520 W. Friendly Ave. Greensboro, N. C. 27401

Multiple Listing Service

A HouseSOLD WORD

Certified Real Estate Appraisers

Market and Feasibility Service

REALTOR®

W. B. "Chick" Holliday, President
WA4NHC
Phone 275-5355

SPECIAL! *CONSOLIDATED TOWER*

LIMITED SUPPLY

MODEL C-16		MODEL HD-16	
40 Feet	$137.00	40 Feet	$157.00
50 Feet	$167.00	50 Feet	$192.00

EACH TOWER IS FOUR OR FIVE SECTIONS INCLUDING ONE TOP
WEIGHT APPROXIMATELY 160 LBS. AND 200 LBS. RESPECTIVELY

Having Trouble Finding Clamps To Hold Large Antennas On Poles or In Trees??? We Have extra Heavy Duty Clamps That will Accept 2¼-Inch OD Mast Easily. (Only Two Holes to Mount Set) Plated to Prevent Rust. SPECIAL ONLY $27.50/SET.

OFFER GOOD AS LONG AS CURRENT STOCKS LAST
ONLY A FEW LEFT AT THIS PRICE

All Orders Must Be Prepaid and Shipping Will Be Collect

WEST ANTENNA

HARWOOD WEST WB4RLO
RT 6 BOX 529 - A
GREENSBORO 27405

919 - 621 - 9941

North Carolina Amateurs Please Add 4% N.C. Sales Tax

ASSOCIATE MEMBERSHIP CONTINUES TO GROW

-by Lindsay Cleveland, W4IZI

This has been quite a year for the CVRA and the "Journal"! We have seen a growth in Associate Members from 1600 last year to 2450 today. Secondly, the annual dues went up to $3.00, the first increase since the Association was formed in 1971. Apparently this did not upset anyone since renewals are coming in just like always. Those who recently joined or renewed for $2.00 were pro-rated to 2/3 of a year (8 months).

The efforts of the Tennessee SCM to organize the repeaters in that state and perhaps affilliate with the CVRA has caused a sudden increase in membership from that area. If some of you wondered why the change in the CVRA's Constitution and By-Laws, it was to provide for the inclusion of new areas into the Association. It's good to see the idea of coordination spreading into other areas. We have been fortunate in the CVRA territory to have kept the problems to a low level. This is of course due to setting up for coordination back in 1971 before there were very many repeaters. However, a lot of the credit is due the Associate Members; they are the ones who have supported the principals of coordination and cooperation over the years. When a new repeater has been considered, there has usually been an Associate Member involved who made the idea of coordination a primary concern of the repeater sponsor(s). These Associates are to be praised for their efforts and I for one certainly do so.

Other fine actions of Associates have been: welcoming new vhf users to the repeaters and providing friendly advice and examples of good repeater operating techniques; supporting their local repeater with funds, time, labor, and equipment; and coming up with new and interesting things to do on repeaters (nets, code practice, walk-a-thon coordination, North Pole-to-Hospital communications, etc).

The membership drives over the past year have really had their effects; the overall membership has jumped with the efforts of many individuals. It seems that at least 50% of the new applications have another hams's call in the "I was responsible . . ." slot, so keep up the fine work. Just so you know how effective your efforts have been in the past, the load has increased to the point that we needed another person to help with the paperwork. Fortunately Ann Young (XYL-N4ARY) showed up at the right time. Some of you may have had the pleasure of meeting her at the CVRA booth at the Charlotte Hamfest. She and Larry McLaurin did a fine job of signing up lots of new members during those two days and I am really glad for their help.

There have been a very few comments made concerning the establishment of a Lifetime Associate Membership. Not much has been explored in this area as yet, but since it keeps popping up, perhaps now is the time to pursue it a bit more. What are your thoughts as to feasability and cost of it? Drop me a short note or make a comment on your renewal form and we will see what developes.

All the best to all of you for the coming summer. I'll be looking for you at the hamfests. It is always nice to meet old and new friends again.

THE FABULOUS MIDLANDS ARE HERE

WILLIAMS RADIO

See Pages 4 & 5

ENC REPEATER, INC. ANNUAL MEET; ELECTS NEW OFFICERS

-by Bill Page, WB4LWX

This annual membership meeting of the ENC Repeater, Inc. operators of the Grifton 16-76 machine was held April 1 in Kinston.

New officers for the year, elected and installed at the meeting were: David Taylor, WA4PHO, Pres.; Marvin Garris, WD4CTC, VP; Vernon Sorrell, WD4EYV, Treas.; and JoAnn Taylor, WD4JYR, Sec.

Repeater trustee is William Page, WB4LWX. CVRA representatives from the group are Vernon Sorrell, WD4EYV, and Calvin M. Dempsey, WA4UQC.

The membership heard a complete report and current status of the repeater organization. Suggested improvements and plans for the future were also discussed, including the coordinating of 085-685 for the second repeater to be located on the new 2,000 foot WITN-TV tower due to be completed this fall.

CHARLESTON HAMFEST

SPONSORED BY

CHARLESTON AMATEUR RADIO SOCIETY

JULY 28-29

GAILLARD MUNICIPAL AUDITORIUM

COMPLETELY AIR CONDITIONED OVERNIGHT SECURITY GUARDS

GENERAL ADMISSION - $3.00 - INCLUDES 1 PRIZE TICKET (12 YRS AND UNDER FREE)

ADDITIONAL PRIZE TICKETS $2.00 EACH OR 5 for $5.00

FLEA MARKET TABLES - $5.00

COMMERCIAL BOOTHS - $35.00 - INCLUDES 2 ADMISSION TICKETS

LADIES ACTIVITIES

July 28 - 8:00 AM - FCC EXAM AT THE COLLEGE OF CHARLESTON

7:30-11:00 PM - HOSPITALITY ROOM (GAILLARD AUDITORIUM)

TALK IN 146.34/94

146.16/76 AND 146.19/79 FOR GENERAL USE

SUNDAY - GRAND PRIZE - ATLAS 210X WITH A/C CONSOLE

SECOND PRIZE - TEMPO S1 SYNCOM WALKIE-TALKIE WITH TOUCH TONE PAD

SATURDAY PRIZE - HYGAIN SIX FREQ WALKIE-TALKIE, COMPLETE WITH LEATHER CASE, TELESCOPING ANT., NICAD PACK AND CHARGER

For more information contact:
CHARLESTON HAMFEST COMMITTEE
P. O. Box 30643
Charleston, SC 29407
(803) 747-2324/795-1068

TEKNIKLE TOPIX *Your SWR is 1.05 to 1? Oh, come now!!*

-by Watson Gabriel, WB4EXW

The above statement as to the value of the standing wave ratio on an antenna is often heard over the air waves. I will make a rash rebuttal to this claim - BUNK (or something worse!) The average amateur will more than likely never have nor ever have access to test equipment than can accurately measure a standing wave ratio of 1.05 to 1. You would probably like some explanation, right?

Let's first take a look as to what SWR is in simple terms. If we have a load on the end of our transmission line that is exactly matched to the characteristic impedance of the line, all of the power in the transmission line will be absorbed by our load. I have assumed that our transmission line has no loss because this brings up another set of problems.

If the load is not equal to the characteristic impedance of the transmission line, we have what is called a mismatched condition. The power headed to the load is not totally absorbed by the load because the load now requires a different voltage/current ratio for maximum power transfer. Thus the load only absorbs part of the power reaching it (commonly called incident or forward power). What is left acts as if it is bounced off a wall and starts back down the transmission line toward the transmitter. This is commonly called reverse or reflected power. The greater the mismatch, the larger the amount of power that will be reflected. If our load is zero or infinity ohms resistive, all of the power will be reflected.

The coincidence of both forward and reflected power in our line creates what we call standing waves. Actually they are the vector sums of the voltage and current waveforms at any point on the transmission line. It is interesting to note that the vector sum of these waves one-half wavelength away from the load is exactly the same as the vector sum at the load. This is repeated every one-half wavelength away from the load.

We can use these standing waves to give us an indication of how well our antenna is matched to our transmission line. The ratio of the maximum voltage on the line to the minimum voltage is called the voltage Standing Wave Ratio or VSWR. Many people just shorten this to SWR. The same is also true of the currents in the line so either can be used for measurement.

VSWR bridges use different circuit arrangements for measurements but they all accomplish the same task (excluding the accuracy of course). We end up measuring the ratio of the incident and reflected voltage to give us an indication of VSWR.

Forward/Reflected power meters are, of course, calibrated in units of RF power (watts). By using some simple equations we can calculate the SWR if we know the forward and reflected powers. Published charts are also available to simplify this task.

In dealing with the accuracy of our measurements we must deal with something called directivity. Directivity gives us a measure of how well the VSWR Bridge or power meter we are using can distinguish between forward and reverse power. The venerable Bird wattmeter has a directivity of greater than 30db which is quite good. Directivity is where many diode-type VSWR bridges such as the Heath HM 2102 falls short. Remember the "SWR Null" adjustment that did not look so good? That's a big part of it. Also we can run into trouble with the power levels the diodes are subjected to because we can drive the diode monitoring the incident power out of it's square-law region and into its linear region and ruin our measurement accuracy.

Even the Bird Model 43 wattmeter has its limitations. One is that the stated accuracy of the measuring elements is -5%. This is very good but if does set limitations for use in measuring power.

Let's look at an example. If we let

$$\rho = \frac{\text{Reverse Power}}{\text{Forward Power}} \qquad \text{then}$$

$$\text{VSWR} = \frac{1 + \sqrt{\rho}}{1 - \sqrt{\rho}}$$

Assuming we have 10 watts forward power and 1 watt reflected (10% reflected), we can calculate a VSWR of 1.92 to 1. If we have 4% reflected power our VSWR is 1.5 to 1.

Now here is the kicker. To be able to measure a VSWR of 1.05 to 1, we must be able to accurately measure 0.06% of our forward power. For 10 watts forward power we must be able to measure 6 milliwatts of reflected power!

Bird Electronics tells the user of its Model 43 instrument that one can only measure VSWR accurately down to about 1.5 to 1 if the user uses a single measuring element. If the element measuring the reverse power is one-tenth the rating of the forward element (100 watt and 10 watt

Continued On Page 12

2-METER RTTY REPEATER ON JOHNSON MT. IN VA.

The Virginia Teletype Society reports their 2-meter RTTY repeater is now on the air from Johnson's Mountain about 15 miles SW of Lynchburg. The machine is located at the WSET-TV tower which is 574 feet tall. Presently the repeater antennas are only 25 feet off the ground, with plans to move higher in the future. The 705-105 machine on the 1328 foot mountain has coverage from Radford to Harrisonburg, Farmville and into Reidsville, N.C. Mobile coverage is about 45 miles.

Operation from the mountain began last Fall. WB4JBJ, trustee for the machine reports there are 9 regular RTTY users of the repeater, some of them on autostart continuously.

The machine operates RTTY or Voice from 6 a.m. to 7 p.m. and 170 hz shift RTTY anytime. From 7 p.m. to 6 a.m. only RTTY with 170 hz shift will bring up the machine.

The group invites anyone on Radio Teletype able to work the machine to join them. They also express an interest in linking with other repeaters for RTTY and/or voice. RTTY nets are on Mondays at 8 p.m. local time.

The CVRA frequency coordinated machine is now a full member of our organization. (Larry, WB4JBJ)

TEKNIKLE TOPIX

Continued From Page 11

elements for example), Bird states that one can accurately measure VSWR down to about 1.16 to 1. Detection of VSWR can be lower but its accuracy is questionable.

So we can see that a big part of our measurement of VSWR deals with the accuracy of our instruments. I did some expermentation along this line using a Bird Model 43, Heath HM2102, some calibrated mismatches, isolation attenuators, and a 10 watt transmitter and was amazed with the results. The Bird 43 was always within its stated accuracy even at different power levels. The HM2102 showed errors as much as 15% and the amount of error varied with power level. I am not picking at Heath about the accuracy of their instrument. For the money it is a fine addition to the hamshack but its performance is typical of many VSWR bridges. These units can be readily used to adjust matching for a minimum VSWR but do not be surprised if the actual VSWR is not what the meter tells you. So, before you make any wild claims be sure of the accuracy of your test equipment.

WEATHER AND AMATEUR RADIO

Continued From Page 1

sightings etc. from their particular area.

The Wake County (Raleigh) N.C. ham group has such a system. They have tried it out a couple of times and it works.

As amateurs . . . we learn of the bad storms coming . . . listening to repeaters and other communications that are not available to the average citizen. We even have our Weather Watch nets where large Amateur communities are made aware of an impending storm. But what about the neighbors who cannot tune us in.

The Weather stations are the answer. We can serve well our neighborhood cities and State by coordinating as a group with the Weather Service, who in turn of course, notifies Radio and TV, whose job it is to alert the general public.

I urge you to take stock of the situation in your community. Is your CP group active? Have you set up an "early warning" system for your local weather bureau? If so, have you held drills to be sure the wheels are well oiled and everyone knows what to do?

How many retired persons on your repeater are available during the daytime, should an emergency occur? Is there a plan where civil authorities know who to contact AT ANY TIME during the day or night?

If you cannot answer positively to all these questions, then someone needs to get to work in your community. We are near the end of the tornado season, but now the hurricane season will be upon us next. Lets be prepared, just in case! Not for the benefit of your friends on the repeaters, but for your neighbors all around you. Get your Civil Preparedness Coordinator to review your Emergency Plan to be sure that you are covered in a weather emergency. The time is now . . . don't wait until its too late and we see destruction and death around us that we might have helped control in some way through our public service. After all, isn't that what we're supposed to do?

-Wayne C. Williams, Editor

WE GOT MIDLAND!

2-meter & 220

WILLIAMS RADIO

See Pages 4 & 5

TEN-TEC

OMNI - D
544, 540
ARGONAUT
CENTURY 21

Accessories

We're 100% Ten-Tec.
How About You?

BI- COMM **BINO COMMUNICATIONS**

2401 DEVEROW PLACE
GREENSBORO, N.C. 27407
(919) 292-8052

Office Hours:
Daily - 3 PM to 10 PM
Sat. - 9 AM to 4 PM

Amateur - Commercial Sales and Service

K4CJZ
CHUCK

WA4IHA
SUE

KA4HIC
KEN

VHF NET REGISTER (Local Times Indicated)

TWO METERS - FM

ANDERSON SC	37/97	WR4AIO	ANDERSON RADIO CLUB NET	DAILY	2000
ASHEVILLE NC	16/76	WR4AEV	WESTERN NORTH CAROLINA TFC NET	TUE	2030
ASHEVILLE NC	16/76	WR4AEV	YL NET	TUE	2100
BENSON NC	87/27	WR4ARL	JOHNSON ARS NET	DAILY	1930
BLUEFIELD VA	4.89/5.49	K8BHG	EAST RIVER RC NET	WED	2030
BURLINGTON NC	07/67	WR4AYO	ALAMANCE COUNTY ARES NET	MF	2100
CATAWBA COUNTY NC	82/82		CATAWBA COUNTY RACES NET	MON	1900
CHARLOTTE NC	34/94	WR4AEU	METROLINA 2-METER EMERG. NET	DAILY	2100
CHERAW SC	735/135	WD4HEH	CHESTERFIELD COUNTY ARS NET	TUE	2030
DANVILLE VA	10/70	WR4BDN	LAST CAPITOL SERVICE NET	TTHSN	2030
DORCHESTER SC	78/18	W4NAT	DORCHESTER AREC/RACES NET	1ST M	
DUBLIN VA	78/18	WB4UQZ	NEW RIVER VALLEY ARC NET	SUN	2100
DURHAM NC	34/94	WR4BEK	TRIANGLE RADIO ALERT NET	DAILY	2030
DURHAM NC	34/94	WR4BEK	POSSUM TROT NET	MF	0630
FAYETTEVILLE NC	31/91	WR4ANN	POSSUM TROT NET	MF	0630
FAYETTEVILLE NC	31/91	WR4ANN	CAPE FEAR ARS NET	DAILY	1900
FLORENCE SC	37/97	WR4AGM	FLORENCE 2-METER NET	MON	2000
FOREST VA	705/105	WB4JBJ	VA. TELETYPE SOC. RTTY NET	MON	2000
GREENSBORO NC	01/61	K4SNI	PIEDMONT TFC. & TRAINING NET	MWF	2030
GREENSBORO NC	16/76	WR4AOD	CVRA INFORMATION NET	WED	2030
GREENSBORO NC	72/12	K4CJZ	GUILFORD COUNTY EMERG. NET	THUR	2100
GREENVILLE NC	52/52		BRIGHTLEAF ARS NET	TUE	2100
GREENVILLE SC	01/61	WR4ADG	BLUE RIDGE ARPSC NET	TUE	2100
GREENWOOD SC	765/165	WR4AUE	ABBEVILLE-GREENWOOD EMERG. NET	TUE	2200
GRIFTON NC	16/76	WR4ABP	ENC EMERGENCY NET	THU	2000
JACKSONVILLE NC	40/00	WD4FVO	ONSLOW ARC NET	WED	2100
LAURENS SC	25/85	WA4UZA	LAURENS COUNTY ARES NET	SUN	2030
LAURINBURG NC	025/625	WR4AOX	SAND HILLS EMERGENCY NET	DAILY	1930
LUMBERTON NC	96/36	WR4BDQ	LUMBERTON ARC NET	MF	2030
LYNCHBURG VA	01/61	WR4AXO	LYNCHBURG TWO METER FM NET	TUE	1900
MORGANTON NC	75/15	WR4AQI	W. PIEDMONT VHF NET	WED	2100
MYRTLE BEACH SC	01/61	WR4AXC	GRAND STRAND 2-METER NET	WED	2100
N. AUGUSTA SC	13/73	WR4ABB	STATELINE NET LAST	SUN	2000
ORANGEBURG SC	69/09	WR4AQY	VHF NET	TUE	1900
RALEIGH NC	04/64	WR4ACF	RARS NET	MTTHF	2000
REIDSVILLE NC	25/85	K4YFT	ROCKINGHAM CTY. ARC NET	TUE	2100
ROANOKE VA	385/985	WR4AFY	ROANOKE VALLEY ARC NET	WED	2000
SALISBURY NC	13/73	WR4AAA	CENT. NORTH CAROLINA TFC. NET	DAILY	2200
SUMTER SC	04/64	WR4AOI	SUMTER RPTR. ASSN 2-METER NET	MON	2130
TAZEWELL VA	75/15	WA4QKH	TRI-COUNTY 2-METER NET	SUN	2000
TIDEWATER AREA VA	37/97	WA4KXV	STARES NET (S. TIDEWATER ARES)	M-F	2100
WHITE HALL SC	31/91	WR4AQL	COASTAL ARA 2-METER NET	THU	2100
WINCHESTER VA	22/82	WR4AGT	SHENANDOAH VALLEY SERVICE NET	DAILY	1915
WINSTON-SALEM NC	04/64	WR4ARD	FORSYTH COUNTY AREC/RACES NET	WED	2100

1½ Meters (220 Mhz) - FM

HILLSBOROUGH NC	2.34/3.94	WA4WTX	PIEDMONT 220 NET	TTH	2100
SAURATOWN MT NC	3.28/4.88	WR4AOW	CVRA INFORMATION NET	WED	2000

TWO METERS - SSB/CW/AM

CINCINNATI OH	145.02	MIDWESTERN SSB NET	STTH	2100
GREENSBORO NC	144.25	NORTH CAROLINA S.W.O.T.	TUE	2100
GREENVILLE SC	144.25	SOUTH CAROLINA S.L.O.T.	M-TH	2100
GREENVILLE SC	145.11	S.L.O.T. NET	MWF	2130
WASHINGTON DC	145.10	MID-ATLANTIC 2-METER NET	WED	2100

SIX METERS

CHARLOTTE NC	50.40	CHARLOTTE HORNET NET (AM)	SUN	2100
CLEMSON SC	50.125	DIXIE NET (SSB)	WED	2100
GLENDALE SPGS. NC	50.12	NORTH CAR. 6-METER NET (SSB)	SUN	0900
RICHMOND VA	50.25	CENTRAL VIRGINIA NET (AM)	DAILY	1900

NET MANAGERS; Be sure to Give the CVRA a Plug. Encourage net checkins to Join the CVRA now, and receive the Journal. Thanks! Are there any changes to your net listing above? Send them to us for correction.

THE DURHAM FM ASSOCIATION

PROUDLY PRESENTS . . .

DURHAMFEST

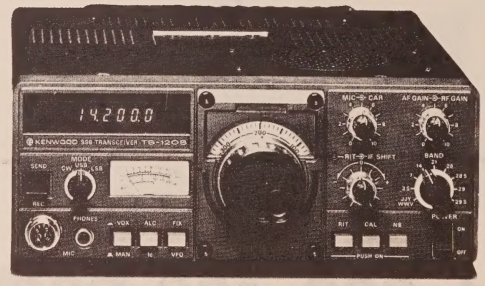
79

May 19th and 20th

South Square Mall
Durham, N. C.
tickets: $3.00
unlicensed XYL's & harmonics! Free

GRAND PRIZE:

KENWOOD'S NEW SOLID STATE 200 WATT, 80-10 METER SSB TRANSCEIVER



TS-120S

Featuring . . .

- 2 day covered flea market, no sellers fee.
- Many fabulous prizes.
- Slow scan and fast scan television demonstrations and seminars. SSTV stations operating on 10,15,20 and two meters and SSTV vendor presentations.
- One of the finest shopping malls in the southeast with over 120 stores.
- Bingo for the ladies on Sunday.

Talk In:
147.825-147.225
146.34 -146.94
222.34 -223.94

For more info write:
DFMA
P. O. Box 8651
Durham, N. C. 27707

DURHAMFEST

BOB'S
AMATEUR RADIO CENTER

WE STOCK WHAT WE ADVERTISE

TEN TEC • DENTRON
AMCOMM • YAESU • SWAN
BIRD • CUSHCRAFT • HUSTLER
HY-GAIN • ASTATC
CDE Rotors • B & W • SHURE
TEMPO • NYE VIKING
ICOM • WILSON
DRAKE • MIRAGE

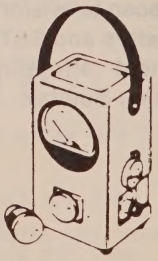
Toll Free
1-800-438-2006

Now Is The Time To Think About That New Tower.
WE CARRY IN STOCK
Consolidated Hot Dip Galvanized

—TOWERS—

WE WILL SHIP ANYWHERE IN THE U.S.A.

the indispensable
BIRD 43



THRULINE WATTMETER

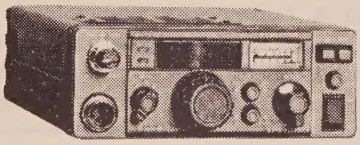
ELEMENTS
2-30 MHZ
25-1000 MHZ

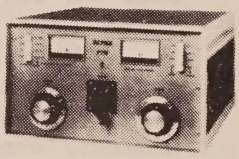
BOB NEMETH, WD4MKZ

318½ N. Main St., Salisbury, NC 28144
Monday-Saturday 9 a.m.-6 p.m., Wed. 'til 9 p.m.
PHONE 704-636-7959

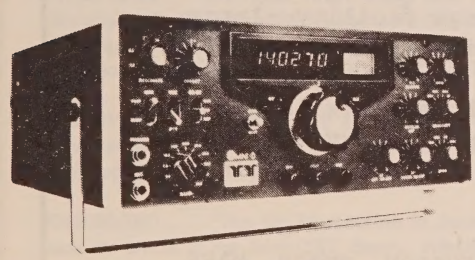
KENWOOD Transceiver TS-520S
60 thru 10M *"Surprise...call us!"*

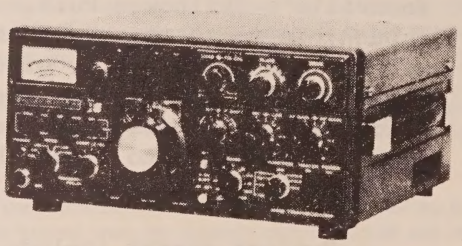
KENWOOD





Alpha 77DX — One 8877 Tube

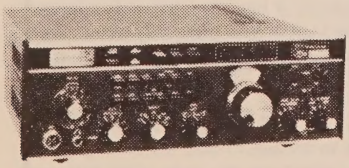


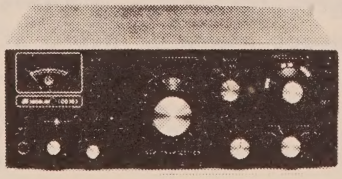


ICOM IC 701S, 160 thru 10M

Alpha 76A
— Two 8874 tubes Hipersil Xfmr.

DRAKE





SWAN

We Also Carry A
Complete Line Of
ACCESSORIES

Radio Amateur Club of Knoxville
P.O. Box 6333
Knoxville, TN 37914

Spring, 1979

Dear OM, YL, Everybody,

Maybe this is a funny way to run an ad for a hamfest, but we wanted to extend as personal an invitation as possible to you to come across the mountains and attend the Knoxville Hamfest/Tennessee Section Convention on Memorial Day weekend, May 26-27.

This year we'll be back at the Jacob Building at Knoxville's Chilhowee Park. It's a large facility--large enough, in fact, to permit an unusual indoor tailgate flea market, and a good array of dealer and manufacturer booths. Incidentally, for non-ham guests, Chilhowee Park is home of a fine amusement park and the world-famous Knoxville Zoo, so don't hesitate to bring the family--there's something for everybody.

Hamfest events include ARRL, emergency, space, MARS and other forums; a CW contest with prizes for fastest copy and certificates of code proficiency from 5 WPM up; and the Wouff Hong initiation will be held at midnight.

On Saturday morning at 8:00 the FCC will administer amateur license exams. They'll be helped by Knoxville's 01/61 repeater group, who will provide exam talk-in on 01/61.

Hamfest talk-in frequencies are 13/73 and 3980. For more information, contact W4NZW or N4BAQ at the above address. We really do hope to see you Memorial Day in Knoxville.

73 — R.A.C.K.

Radio Amateur Club of Knoxville

SOUTH CAROLINA STATE NEWS

JACK WATSON, W4YPD, Director

ANDERSON . . . A new 450 mhz repeater and a 10-meter repeater are the latest for the Anderson area. Both machines operate under the call of N4JK/R. The 10-meter machine which is on the air operates in the AM mode. The frequencies of 29.530-29.630 are being used as input and output for the machine. The new 450 mhz repeater reportedly still under construction will operate on 427.25-439.25. (K4MOB)

COLUMBIA . . . The WR4ASE 96-36 machine has been moved to Edmund, about 17 miles SW of Columbia. The repeater operated by the Columbia ARC (formerly Carolina Repeater Society) now uses the call of WR4ACD. (Paul, K4AVU)

COLUMBIA . . . The Columbia 28-88 repeater located in downtown Columbia is doing a good job for DXers in the area. Although the machine is open to all, it is used a lot by members of the Central SC DX Association as a DX alert machine. The K4AVU/R machine has output power of 25 watts. The 3 minute timer on the machine is reset on the transmitter. (Paul, K4AVU)

GREER . . . The Greer 220 mhz repeater is now on the air. The 222.38-223.98 is a closed Autopatch machine operating under the call of W4ILY/R. This machine joins the Columbia and Greenville 220 mhz machines, making the 3rd one on the air in SC, with one more still under construction. (Ken, WA4BVW)

TENNESSEE STATE NEWS

Bob May, K4SE, Reporter

CVRA/TENN . . . Jim Roller, N4IR, Upper East Tennessee Repeater Co-ordinator made a very convincing appeal for a Tennessee/CVRA merger at the February Quad Cities Radio meeting in Johnson City. It is known that the Johnson City and Kingsport Amateur Radio Clubs have passed resolutions supporting such a merger. We can hope to see Positive action soon, especially in view of the new CVRA constitutional changes. (Bob, K4SE)

GREENVILLE . . . A new 220 mhz repeater will be on in Greenville soon. The machine and duplexer are being homebrewed by Larry, WB4NKM. Reports are that the repeater is nearly finished. The frequency of 223.34-224.94 has been coordinated.

JONESBORO . . . The 99-39 machine in Jonesboro duplexer parts procurement problem has been solved by the duplexer article in the April QST. Benny, WB4SQC, the repeater trustee, says the duplexer should be built and the repeater should have much better range by the time the Journal is out.

KNOXVILLE . . . A 220 mhz. repeater is on the air in Knoxville, temporarily at the home of Keith Henson, WB4BYH for initial testing. The machine operating on 222.86-224.46 will be moved to a permanent site at a higher elevation at a later date. 220 activity in the area has picked up considerably over the past few months. The repeater is a result of the activity. (Ken, WA4BVW)

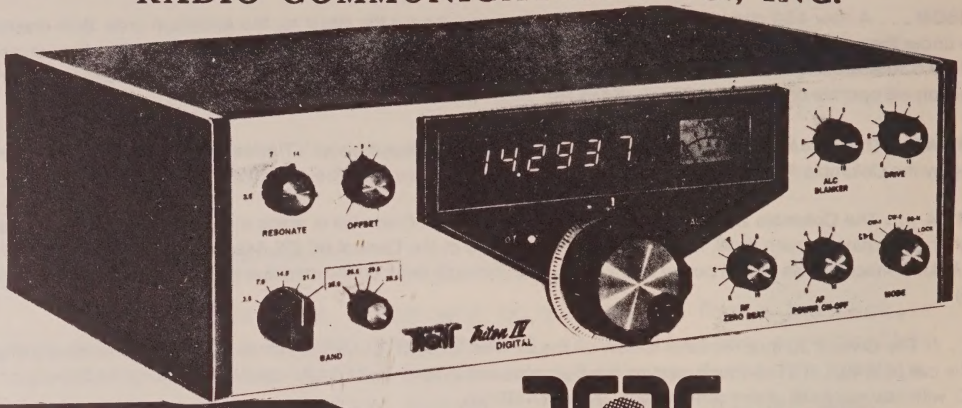
KINGSPORT . . . Eddie Palmer had his 16-76 WR4ADO repeater back on the air from Holsten Mt. in early April. Eddie took a vacation from Amateur Radio to take up flying for a short period, now he's back. (K4MOB, Wayne)

WELCH, W.VA. . . . Jack N8ACQ has coordinated 144.85-145.45 for a repeater to be constructed on Caretta Mt. in McDowell County, W. Va. The call of the proposed machine will be WB8SZX.

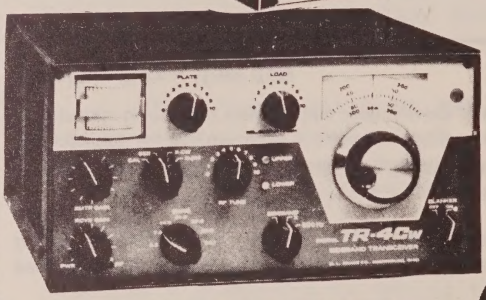
TIDEWATER . . . The Office of the Emergency Coordinator for the tidewater area reports that all the area tidewater repeater 2-meter nets and a 10-meter net have combined into one. The South Tidewater Amateur Radio Emergency Service Net (STARES Net) is held at 9 p.m. Monday through Friday on the Virginia Beach 37-97, WA4KXV/R repeater. Each City EC is responsible for providing net control one night a week, with Va. Beach having Tuesday and Wednesday nights. (Neil, WD4RDF)

JACKSONVILLE BEACH, FLA. . . . Jim Menefee, WA4KKY, a former resident of Hillsborough now residing in Florida was recently elected Vice-President of the florida Repeater Council. (Perhaps Jim will be able to exchange some Florida repeater information with the CVRA.) (Herman, WB4DBB)

RADIO COMMUNICATIONS CO., INC.



TEN-TEC, INC.



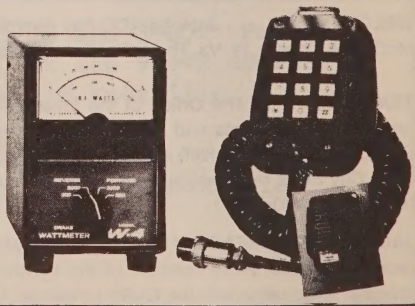
vhf engineering

DRAKE

HUSTLER

Larsen Antennas

ROHN



RADIO COMMUNICATIONS COMPANY, INC.
311 Shenandoah Ave., N.W.
Roanoke, Virginia 24016
Area 703-342-8513

DANVILLE . . . The Danville Community College ARC plans to raise the height of the DCC repeater antenna system from 40 to 110 feet. The machine on the air last fall, has picked up a lot of followers in the Danville area. The machine operating on 325-925, WB4GJG is at the local Community College and is maintained by students and Amateur instructors of the college. (Jim, WD4HXX)

GALAX . . . The CVRA has coordinated a 2-meter and a 220 mhz frequency for the Briarpatch ARC. The 2-meter frequency will be used when the group moves the local 34-94 repeater from Galax to a higher location sometime this summer. The 2-meter sub-band frequency of 144.71-145.31 has been confirmed to the group. The club also plans to construct a 220 mhz repeater on 222.74-224.34 hopefully by fall. 220 interest is picking up in the Galax area with a couple on and others considering. This will be only the 2nd 220 repeater for the Virginia District, the other at Tysons Corner out of Washington.

MARTINSVILLE . . . Dave Eanes N4AZI has confirmed re-coordination of the 144.61-145.21 frequency pair for moving the former Sauratown Mt. (NC) repeater to Buffalo Mt. at 4,000 feet in Floyd County. The complete Regency machine was purchased and moving began immediately in the Spring. On-air date not confirmed, but should be on soon, if not already at press time.

KILMONARCK . . . The new 93-33 repeater at Kilmonarck/Saluda is now located in its permanent location and providing excellent coverage into the area, including Richmond and other nearby areas. The repeater call is WA4UAF/R.

SOUTH HILL . . . The South Hill 84-24 repeater has been taken off the air. It will be relocated in Alberta, approximately 20 miles north of its old location at a future date.

RICHMOND . . . Jim, WA4ONG reports his 449.85-444.85 repeater on the air. The machine is a Motorola Compa Station. Coverage of the machine has not been established as of yet. More information later.

GALAX . . . The sub-band pair of 144.83-145.43 has been coordinated by the Virginia District Director of CVRA to Ronald Leagan, WA4ZIV. No additional information is available at press time.

TAZEWELL . . . The new 450 mhz. repeater to be located at Tazewell is waiting for its antenna. The equipment is in place and ready for final tests when the antenna arrives, hopefully by the time you read this. The repeater to be operated by WA4QKH, Raymond Cox on 448.90-443.90.

TIDEWATER . . . Wally Burkette, WA4KXV reports all repeaters in the Tidewater area functioning well and providing good coverage for the area. They are: Virginia Beach, 37-97, Chesapeake, 19-79, Hampton 34-94 and 13-73 and Portsmouth, 25-85. Four of the machines are on 24-hours daily, except the Portsmouth operating from 8 a.m. to 5 p.m. (Wally, WA4KXV)

RICHMOND . . . The Richmond Amateur Radio Club 34-94 repeater has changed its call from WR4ADI to W4ZA/R. Joe Galeski is trustee and Red Kiepper, W4SQT chairman of the repeater committee. The repeater logged 14 hours of key-down time recently with an average of 8 hours daily key down time. The machine was knocked down for the first time since Nov. 1977 during a heavy rainstorm in March. (Jim, K4OJE)

RICHMOND . . . The Telephone Pioneers 04-64 machine is now operating nicely after its shakedown period. Antenna improvements are planned in the near future. The machine, WB4QEY/R operates 24 hours daily. Trustee is Cliff Williams. (Jim, K4OJE)

HIGHLAND SPRINGS (Suburban Richmond) . . . Glen Fields, W4TJF advises his 10-70 repeater hopefully will be operational by the time you read this. Glen said the machine will provide badly needed additional mobile coverage in the Highland Springs area for local Amateurs. (Jim, K4OJE)

GUM SPRINGS . . . The Gum Springs 87-27 repeater will have improvements made to its duplexer to upgrade service in the near future. This popular machine is located near I-64 between Richmond and Charlottesville and is on 24 hours daily.

MORGANTON . . . Michael Fowler, WB4PML is planning a 220 mhz. repeater for the Morganton area. The frequency of 223.36-224.96 has been coordinated by the CVRA. Several Amateurs in the Morganton area have been on 220 mhz. for several years and a few new ones have gotten on lately. The new repeater is expected to stir much new 220 mhz. activity in the area.

MORGANTON . . . The frequency of 144.55-145.15 has been coordinated to Karl Lambert, WB4UDS for a new 2-meter repeater in the Morganton area. No other information is available for this issue of the Journal.

JACKSONVILLE . . . The frequency of 90-30 has been coordinated through the CVRA to Luther McIntyre, KA4AE for a proposed repeater in the Jacksonville area. No other information is asvailable at this time.

SEVEN SPRINGS . . . Discussions are taking place, looking toward a possible change in the site of the WR4AEF, 25-85 repeater which has been located at Seven Springs since 1973. If this materializes, this machine might be moved about 10 miles North to a new location on the Radio Station WFMC Goldsboro tower. The advantages here would be somewhat better coverage of the Goldsboro area and to eliminate rotary dial-to-pulse complications on the autopatch. A Goldsboro ARC group is considering assuming sponsorship responsibility of the repeater. Don Price, WA4KLR, owner and licensee of WR4AEF has indicated a willingness to turn the repeater over to a responsible group. (Bill, WB4LWX)

MT. AIRY . . . The Surry ARA has coordinated the frequency of 144.73-145.33 for a repeater. The group's spokesman, Bob Wiseman, AA4RW said the machine is on for testing presently and they hope to have in on the air this month. The machine is temporarily located at AA4RW's home, SE of Mt. Airy. Plans are tentative, but the group hopes to move the repeater to a site on Fancy Gap Mt. in Virginia, North of Mt. Airy during the summer. Actual coverage at the Fancy Gap site is unknown, but the group describes operation there as "tremendous". More news later.

GRIFTON . . . The Eastern North Carolina Repeater club, ENC, Repeater, Inc. has coordinated the frequency of 085-685 for a proposed new frequency for their second repeater. The new machine will be located at a higher level on a new 2,000 foot WITN-TV tower which is expected to erected by mid-summer. The group expects to run tests on the frequency by mid or late summer. The new tower site is about 3,000-feet East of the present tower which the 16-76 repeater is located. The 16-76 machine will continue operation as is until the old tower is torn down and will then be moved to a similar height on the new tower, below the 085-685 machine's antennas. (Bill, WB4LWX)

DURHAM . . . Herman Cone, WB4DBB reports that the 222.34-223.94 repeater is now linked with a 6-meter remote base. The 50 watt base outputs on 52.525 and depressing "1" on the touchtone pad links the 220 repeater to the base unit. Disconnect is on the digit "3". The 220 input receiver has priority over the 6-meter base unit preventing incoming 6-meter signals from interrupting normal traffic on the 220-repeater. (Herman, WB4DBB)

MT. PISGAH . . . The 450 repeater WR4ALE is now in operation from atop Mt. Pisgah near Asheville, The 449.9-444.9 machine has 58 watts ERP, an open, carrier accessed machine and is operated 24-hours daily. Bill Jenkins, WA4COS also has coordinated the 2-meter pair of 144.65-145.25 for future experiments with a 2-meter machine in conjunction with the 450 mhz repeater.

BURNSVILLE . . . Ed, WD4FXR reports the new Burnsville repeater, 975-375 should be operational shortly, if not on by the time you read this. The holdup has been waiting for the duplexer. More news on coverage later.

HIGH POINT . . . The 222.32-223.92 repeater was pulled out of service in early Spring and completely rebuilt as a separate repeater. Antenna improvements are still planned for the machine, but good Triad coverage is available now. The machine will later be linked bafck with the 6-meter repeater. F.L., K4AZA plans a 4-band linkup system ultimately. A new Spectrum Communications repeater system complete with Autopatch and tone access functions is being built up to replace the old 40-00 machine. The 447.90-442.90 repeaer is being rebuilt also. Presently only the 220 mhz. machine is on the air, but the other 3 bands of machines should be on in the near future, with link or unlink features for any of the 4 bands of repeaters. (Jim, WA4YHH)

DISTRIBUTION OF REPEATERS BY FREQUENCY

MAY 1979

TWO METERS

4.?? /5.??	GALAX	VA
4.55 /5.15	MORGANTON	NC
4.61 /5.21	SAURATOWN MT	NC
	GASTON	SC
4.73 /5.33	MT AIRY	NC
4.75 /5.35	BLAND	VA
4.79 /5.39	SAURATOWN MT	NC
4.83 /5.43	ALEXANDRIA	VA
	GALAX	VA
4.87 /5.47	LILLINGTON	NC
4.89 /5.49	BLUEFIELD (WVA)	VA
6.01 /6.61	GREENSBORO	NC
	NEW BERN	NC
	GREENVILLE	SC
	MYRTLE BEACH	SC
	BRUMLEY MT	VA
	LYNCHBURG	VA
6.025/6.625	LAURINBURG	NC
	NEW MARKET	VA
6.04 /6.64	HENDERSONVILLE	NC
	RALEIGH	NC
	WINSTON-SALEM	NC
	SUMTER	SC
	RICHMOND	VA
6.055/6.655	CONCORD/KANNAP.	NC
	ALEXANDRIA	VA
6.07 /6.67	BURLINGTON	NC
	FOREST CITY	NC
	BARREN SPRINGS	VA
	LEXINGTON	VA
	WILLIAMSBURG	VA
6.085/6.685	GRIFTON	NC
	STATESVILLE	NC
6.10 /6.70	CHARLESTON	SC
	GREENVILLE	SC
	LANCASTER	SC
	DAN/WHT.OAK MT	VA
	HIGHLAND SPRNGS	VA
	NORFOLK	VA
6.115/6.715	FAYETTEVILLE	NC
	HERNDON	VA
6.13 /6.73	KNOXVILLE(TN)	NC
	SALISBURY	NC
	WILMINGTON	NC
	N. AUGUSTA	SC
	HAMPTON	VA
	ROANOKE	VA
6.16 /6.76	ASHVL/MT PISGAH	NC
	GREENSBORO	NC
	GRIFTON	NC
	CHARLESTON	SC
	COLUMBIA	SC
	CHARLOTTESVILLE	VA
	EAST RIVER MTN	VA
	FOREST	VA
6.175/6.775	ELIZABETHTOWN	NC
6.19 /6.79	HIGH POINT	NC
	JOHNSON CTY(TN)	NC
	CHARLESTON	SC
	TOCCOA (GA)	SC
	CHESAPEAKE	VA
	FAIRFAX	VA
6.205/6.805	GASTONIA	NC
6.22 /6.82	DURHAM	NC
	ROARING GAP	NC
	WILMINGTON	NC
	GREENVILLE	SC
	COVINGTON	VA
	WINCHESTER	VA
6.235/6.835	WADESBORO	NC
6.25 /6.85	HICKORY/BRT. MT	NC
	REIDSVILLE	NC
	SEVEN SPRINGS	NC
	FLORENCE	SC
	LAURENS	SC
	SUMMERVILLE	SC
	PORTSMOUTH	VA
6.265/6.865	HIGH POINT	NC
6.23 /6.88	RALEIGH	NC
	SHELBY	NC
	COLUMBIA	SC
	SAVANNAH (GA)	SC
	RICHMOND	VA
	ROANOKE/SALEM	VA
6.295/6.895	WILLIAMSTON	NC
6.31 /6.91	AHOSKIE	NC
	ASHEVILLE	NC
	FAYETTEVILLE	NC
	LEXINGTON	NC
	WHITE HALL	SC
	BLACKSBURG	VA
	FARMVILLE	VA
	ROANOKE	VA
	TYSONS CORNER	VA
6.325/6.925	DANVILLE(DCC)	VA
6.34 /6.94	ASHEVILLE	NC
	BURGAW	NC
	CHARLOTTE	NC
	DURHAM	NC
	JACKSONVILLE	NC
	MANTEO	NC
	CHARLESTON	SC
	COLUMBIA	SC
	GREER	SC
	GALAX	VA
	HAMPTON	VA
	LYNCHBURG	VA
	RICHMOND	VA
	ROANOKE	VA
6.355/6.955	ROCKINGHAM	NC
6.37 /6.97	KINGS MTN	NC
	MT AIRY	NC
	SMITHFIELD	NC
	ANDERSON	SC
	FLORENCE	SC
	SAVANNAH (GA)	SC
	MANASSAS	VA
	STAUNTON	VA
	VIRGINIA BEACH	VA
6.385/6.985	ALBEMARLE	NC
	ROANOKE	VA
6.40 /7.00	HIGH POINT	NC
	JACKSONVILLE	NC
	MARION	SC
	PICKENS	SC
	SUFFOLK	VA
6.43 /7.03	ERWIN	NC
	YORK CO. C.D.	SC
	BLACKSBURG	VA
6.46 /7.06	CHARLOTTE	NC
	ELIZABETH CITY	NC
	SOUTH BOSTON	VA
6.475/7.075	BURLINGTON	NC
7.015/6.415	BLUEFIELD	VA
7.255/6.835	COLUMBIA	SC
7.30 /7.90	MONROE	NC
7.38 /7.98	DURHAM	NC
7.60 /7.00	HIGH POINT	NC
7.615/6.015	SUMTER	SC
	FREDRICKSBURG	VA
7.63 /7.03	GREENSBORO	NC
	ROANOKE RAPIDS	NC
7.645/7.045	GREENVILLE	SC
7.66 /7.06	MACO	NC
	SUMTER/SHAW	SC
	RICHMOND	VA
7.675/7.075	GREENVILLE	SC
	CRIMORA	VA
7.69 /7.09	GREENVILLE	NC
	ORANGEBURG	SC
	SPARTANBURG	SC
	BRIARPATCH MT	VA
7.705/7.105	MARION	NC
	JOHNSN MT/FRST	VA
7.72 /7.12	GASTONIA	NC
	GREENSBORO	NC
	ROCKY MOUNT	NC
	ALEXANDRIA	VA
	CULPEPPER	VA
7.735/7.135	ROBBINSVILLE	NC
	CHERAW	SC
7.75 /7.15	MORGANTON	NC
	RALEIGH	NC
	ETTRICK	VA
	TAZEWELL	VA
7.765/7.165	GREENWOOD	SC
	WARRENTON	VA
7.78 /7.18	MT AIRY	NC
	SANFORD	NC
	DORCHESTER	SC
	FT MILL	SC
	DUBLIN	VA
	PETERSBURG	VA
7.795/7.195	LAKE TOXAWAY	NC
7.81 /7.21	GREENSBORO	NC
	LITTLE MT	SC
	HIGH KNOB	VA
	MCLEAN	VA
	RUSTBURG	VA
7.825/7.225	HILLSBOROUGH	NC
7.84 /7.24	EDEN	NC
	FRANKLIN	NC
	PINE BLUFF	NC
	SHELBY	NC
	COLUMBIA	SC
	SOUTH HILL	VA
	WOODBRIDGE	VA
7.855/7.255	ASHEBORO	NC
7.87 /7.27	BENSON	NC
	GASTONIA	NC
	JOHNSON CTY(TN)	NC
	WAYNESVILLE	NC
	CHARLESTON	SC
	LONG MT	SC
	GUM SPRING	VA
	SALEM	VA
7.885/7.285	MARTINSVILLE	VA
7.90 /7.30	JACKSONVILLE	NC
	LEXINGTON	NC
	SYLVA	NC
	BERRYVILLE	VA
	FRANKLIN	VA
	GRUNDY	VA
7.915/7.315	KERNERSVILLE	NC
	ALEXANDRIA	VA
7.93 /7.33	FAYETTEVILLE	NC
	LENOIR	NC
	COLUMBIA	SC
	N. AUGUSTA	SC
	COLE MT	VA
	KLMNRK/SALUDA	VA
7.945/7.345	SHELBY	NC
	DANVILLE	VA
7.96 /7.36	BOONE	NC
	LUMBERTON	NC
	EDMUND	SC
7.975/7.375	BURNSVILLE	NC
	SALEM	VA
7.99 /7.39	CHARLOTTE	NC
	EDENTON	NC
	PETERSBURG	VA

NORTH CAROLINA REPEATERS

TWO METERS

AHOSKIE	WR4AFB	146.31	146.91	N	PA
ALBEMARLE	WR4BBX	146.385	146.985		
ASHEBORO	WR4AOE	147.855	147.255		PA
ASHEVILLE	WB4DRN	146.31	146.91	N	A
ASHEVILLE	WA4QCO	146.34	146.94	N	
ASHVL/MT PISGAH	WR4AEV	146.16	146.76		
BENSON	WR4ARL	147.87	147.27		PA
BOONE	WR4ATQ	147.96	147.36		PA
BURGAW	K4LZY	146.34	146.94		
BURLINGTON	WR4AYO	146.07	146.67	N	A
BURLINGTON	W4VGZ	146.475	147.075		EA
BURNSVILLE	WA4LLR	147.975	147.375	N	P
CHARLOTTE	WR4AEU	146.34	146.94	N	A
CHARLOTTE	WR4ALO	146.46	147.06	N	A
CHARLOTTE	WR4AWQ	147.99	147.39	N	
CONCORD/KANNAP.	K4CEB	146.055	146.655		A
DURHAM	WA4WTX	146.22	146.82		
DURHAM	WR4BEK	146.34	146.94		A
DURHAM	WR4AJY	147.38	147.98	N	
EDEN	WR4AZX	147.84	147.24	N	
EDENTON	WA4JOK	147.99	147.39	N	C
ELIZABETH CITY	WA4VTX	146.46	147.06		A
ELIZABETHTOWN	W4DCD	146.175	146.775	N	P
ERWIN	WR4ALY	146.43	147.03	N	
FAYETTEVILLE	WR4BCA	146.115	146.715	N	
FAYETTEVILLE	WR4ANN	146.31	146.91		A
FAYETTEVILLE	W4LPL	147.93	147.33		
FOREST CITY	WR4AHA	146.07	146.67	N	A
FRANKLIN	WR4ALD	147.84	147.24	N	
GASTONIA	K4ZFD	146.205	146.805	N	L
GASTONIA	WR4ATP	147.72	147.12	N	A
GASTONIA	WD4KGM	147.87	147.27	N	
GREENSBORO	K4SNI	146.01	146.61		A
GREENSBORO	WR4AOD	146.16	146.76		
GREENSBORO	WD4IPZ	147.63	147.03		A
GREENSBORO	K4CJZ	147.72	147.12		EA
GREENSBORO	WR4ANL	147.81	147.21	N	
GREENVILLE	W4GDF	147.69	147.09		A
GRIFTON	W4NBR	146.085	146.685		P
GRIFTON	WR4ABP	146.16	146.76		
HENDERSONVILLE	WR4ALC	146.04	146.64	N	
HICKORY/BRT. MT	WR4ACM	146.25	146.85		
HIGH POINT	WR4AFV	146.19	146.79		
HIGH POINT	WD4EMX	146.265	146.865		P
HIGH POINT	K4AZA	146.40	147.00	N	P
HIGH POINT	K4AZA	147.60	147.00	N	P
HILLSBOROUGH	WA4WTX	147.825	147.225		PA
JACKSONVILLE	WR4ATW	146.34	146.94	N	A
JACKSONVILLE	WD4FVO	146.40	147.00		A
JACKSONVILLE	KA4AE	147.90	147.30	N	P
JOHNSON CTY(TN)	WR4AIP	146.19	146.79		
JOHNSON CTY(TN)	WA4DIU	147.87	147.27		A
KERNERSVILLE	WB4RGV	147.915	147.315	N	
KINGS MTN	WR4AYN	146.37	146.97		
KNOXVILLE(TN)	WR4APU	146.13	146.73		
LAKE TOXAWAY	WR4AGH	147.795	147.195	N	
LAURINBURG	WR4AOX	146.025	146.625		
LENOIR	WR4ARG	147.93	147.33		
LEXINGTON	WR4BDA	146.31	146.91		PA
LEXINGTON	WR4ABX	147.90	147.30	N	C
LILLINGTON	WA4FKI	144.87	145.47	N	
LUMBERTON	WR4BDQ	147.96	147.36	N	A
MACO	K4OVA	147.66	147.06		
MANTEO	WR4AKB	146.34	146.94		PA
MARION	WR4BBN	147.705	147.105		A
MONROE	WR4APY	147.30	147.90	N	
MORGANTON	WB4UDS	144.55	145.15	N	P
MORGANTON	WR4AQI	147.75	147.15		
MT AIRY	AA4RN	144.73	145.33		
MT AIRY	WB4UJH	146.37	146.97		
MT AIRY	WR4AHE	147.78	147.18	N	
NEW BERN	WD4JMS	146.01	146.61		A
PINE BLUFF	WR4BAR	147.84	147.24	N	
RALEIGH	WR4ACF	146.04	146.64	N	
RALEIGH	WR4AOE	146.28	146.88		
RALEIGH	WR4AOE	147.75	147.15		PA
REIDSVILLE	K4YFT	146.25	146.85		
ROANOKE RAPIDS	K4PUV	147.63	147.03		
ROARING GAP	WR4AGS	146.22	146.82	N	
ROBBINSVILLE	WR4BAN	147.735	147.135		
ROCKINGHAM	WB4DZO	146.355	146.955	N	C
ROCKY MOUNT	WD4HIG	147.72	147.12		A
SALISBURY	WR4AAA	146.13	146.73		
SANFORD	WB4EJJ	147.78	147.18	N	A
SAURATOWN MT	AB4X	144.61	145.21	N	
SAURATOWN MT	WB4SNA	144.79	145.39	N	CL
SEVEN SPRINGS	WR4AEF	146.25	146.85		A
SHELBY	WR4ABF	146.28	146.88	N	
SHELBY	WR4AWU	147.84	147.24	N	
SHELBY	WR4ABF	147.945	147.345	N	A
SMITHFIELD	WR4BBO	146.37	146.97		
STATESVILLE	WR4AZS	146.085	146.685		
SYLVA	KA4V	147.90	147.30		
WADESBORO	W4USH	146.235	146.835	N	
WAYNESVILLE	N4SM	147.87	147.27		PA
WILLIAMSTON	WR4	146.295	146.895	N	P
WILMINGTON	WR4AVF	146.13	146.73		
WILMINGTON	WR4AHL	146.22	146.82		
WINSTON-SALEM	WR4ARD	146.04	146.64		A

SIX METERS

CARY	WR4AVP	52.35	53.35	N	
CHARLOTTE	WA4TPZ	52.07	53.07	N	P
HENDERSONVILLE	WR4ALC	52.01	53.01	N	O
HICKORY	WR4ACM	52.47	53.47		
HIGH POINT	K4AZA	52.41	53.41	N	P
HILLSBOROUGH	WB4DBB	52.15	53.15		L
RALEIGH	WR4AOE	52.05	53.05		
RALEIGH	WA4PEN	52.25	53.25		C
ROBBINSVILLE	WR4BAN	52.15	53.15		
SAURATOWN MT	WR4AOW	52.17	53.17		C

220 MHZ

ASHVL/MT PISGAH	WR4AEV	222.34	223.94		
CHARLOTTE	W4YYF	222.22	223.82	N	P
FAYETTEVILLE	WR4ADK	222.42	224.02		
GIBSONVILLE	WR4BBS	223.22	224.82		
HICKORY	WR4ACM	222.42	224.02		
HIGH POINT	K4AZA	222.32	223.92	N	L
HILLSBOROUGH	WA4WTX	222.34	223.94		
HILLSBOROUGH	WB4DBB	222.50	224.10		L
HILLSBOROUGH	WB4DBB	223.34	224.94		P
LOCUST	WR4BBA	222.40	224.00		
MOCKSVILLE	WB4SNA	222.54	224.14	N	P
MORGANTON	WB4PML	223.36	224.96	N	P
RALEIGH	WA4PEN	223.04	224.64		
SALISBURY	WR4AAA	223.16	224.76		
SAURATOWN MT	WR4AOW	223.28	224.88		
STATESVILLE	WR4	222.70	224.30	N	P
SYLVA	KA4V	223.34	224.94		C
WINSTON-SALEM	WR4ARD	223.10	224.70		R

450 MHZ

ASHEVILLE	WR4ALE	449.90	444.90	N	C
BURLINGTON	WR4AKY	448.25	447.25	N	VC
CHARLOTTE	WR4ALO	449.85	444.85	N	
CONCORD/KANNAP.	WA4UPO	449.65	444.65	N	C
DENVER	WR4	447.75	443.75	N	P
DURHAM	WR4	449.00	444.00	N	P
HIGH POINT	WR4ADR	447.90	442.90	N	
HILLSBOROUGH	WA4WTX	449.10	444.10		PA
HILLSBOROUGH	WB4DBB	449.35	444.35		
LEXINGTON	WR4	448.31	443.31	N	P
LILLINGTON	WR4	448.10	443.10	N	P
MOYOCK	WR4BBP	447.10	444.10	N	C
SALISBURY	WR4AAA	449.70	444.70		P
SAURATOWN MT	WR4AOW	448.00	443.00		C

VIRGINIA REPEATERS

TWO METERS

ALEXANDRIA	W8LMB	144.83	145.43	M	
ALEXANDRIA	WR4AXB	146.055	146.665	M	
ALEXANDRIA	W4HFH	147.72	147.12	M	
ALEXANDRIA	WR4ATZ	147.915	147.315	M	
BARREN SPRINGS	WR4AFQ	146.07	146.67		
BERRYVILLE	WR4APE	147.90	147.30	M	
BLACKSBURG	WR4AXT	146.31	146.91	N	C
BLACKSBURG	WA4YRJ	146.43	147.03		
BLAND	N4AZJ	144.75	145.35	N	P
BLUEFIELD	WD8OGY	147.015	146.415	N	
BLUEFIELD (WVA)	K8BHG	144.89	145.49	N	
BRIARPATCH MT	WR4AHR	147.69	147.09	N	L
BRUMLEY MT	WR4ATJ	146.01	146.61	N	
CHARLOTTESVILLE	WR4ATL	146.16	146.76	N	
CHESAPEAKE	WR4ACN	146.19	146.79		
COLE MT	WR4BCI	147.93	147.33	N	
COVINGTON	WA4HTI	146.22	146.82		
CRIMORA	W4NPT	147.675	147.075	N	P
CULPEPPER	WR4BCS	147.72	147.12	M	
DAN/WHT.OAK MT	WR4BDN	146.10	146.70		
DANVILLE	WR4AHG	147.945	147.345	N	
DANVILLE(DCC)	WB4GJG	146.325	146.925		
DUBLIN	WB4UQZ	147.78	147.18		
EAST RIVER MTN	WR4AXS	146.16	146.76		A
ETTRICK	K4SII	147.75	147.15	N	P
FAIRFAX	WR4AAD	146.19	146.79	M	PA
FARMVILLE	WR4ASW	146.31	146.91		
FOREST	WR4ADY	146.16	146.76		A
FRANKLIN	K4SPS	147.90	147.30		PA
FREDRICKSBURG	N4QD	147.615	147.015	N	P
GALAX	WR4	144.??	145.??	N	P
GALAX	WA4ZIV	144.83	145.43	N	P
GALAX	WR4AHR	146.34	146.94	N	C
GRUNDY	WR4	147.90	147.30	N	A
GUM SPRING	WR4BBI	147.87	147.27	N	
HAMPTON	WR4ALW	146.13	146.73		
HAMPTON	WR4AFT	146.34	146.94	N	T
HERNDON	WA4TXE	146.115	146.715	M	P
HIGH KNOB	K4AXO	147.81	147.21	N	C
HIGHLAND SPRNGS	W4TJF	146.10	146.70	N	C
JOHNSN MT/FRST	WR4JBJ	147.705	147.105		R
KLMNRK/SALUDA	WA4UAF	147.93	147.33		
LEXINGTON	WA4WBD	146.07	146.67	N	C
LYNCHBURG	WR4AXO	146.01	146.61		
LYNCHBURG	WD4EXH	146.34	146.94	N	
MANASSAS	WB4HHN	146.37	146.97	N	T
MARTINSVILLE	WB4HAD	147.885	147.285	N	
MCLEAN	WR4APC	147.81	147.21	M	R
NEW MARKET	WR4ATG	146.025	146.625	M	
NORFOLK	WR4ANT	146.10	146.70	N	
PETERSBURG	WR4BDX	147.78	147.18		A
PETERSBURG	W4LGG	147.99	147.39		PA
PORTSMOUTH	K4LMY	146.25	146.85	N	
RICHMOND	WB4QEY	146.04	146.64		
RICHMOND	WR4BBZ	146.28	146.88	N	PA
RICHMOND	WR4ADI	146.34	146.94		T
RICHMOND	WA4DMO	147.66	147.06	N	P
ROANOKE	WR4AMQ	146.13	146.73	N	C
ROANOKE	WD4GOE	146.31	146.91	N	
ROANOKE	WR4AHT	146.34	146.94	N	
ROANOKE	WR4AFY	146.385	146.985	N	
ROANOKE/SALEM	WR4AFE	146.28	146.88	N	L
RUSTBURG	WD4EXH	147.81	147.21	N	P
SALEM	WR4	147.87	147.27	N	C
SALEM	WR4	147.975	147.375	N	C
SOUTH BOSTON	WR4AYU	146.46	147.06	N	
SOUTH HILL	WR4BBU	147.84	147.24		O
STAUNTON	WR4ACL	146.37	147.97	N	
SUFFOLK	WR4AKS	146.40	147.00		PA
TAZEWELL	WA4QKH	147.75	147.15		
TYSONS CORNER	K4VYN	146.31	146.91	M	PA
VIRGINIA BEACH	WA4KXV	146.37	146.97		EA
WARRENTON	WB4FJT	147.765	147.165	N	P
WILLIAMSBURG	W4NTG	146.07	146.67	N	
WINCHESTER	WR4AGT	146.22	146.82		
WOODBRIDGE	WR4AII	147.84	147.24	M	A

6 METERS

ABINGTON	WR4ATJ	52.01	53.01	N	L
ALEXANDRIA	WR4ANC	52.13	53.13	M	C
CHARLOTTESVILLE	WR4AYG	52.76	53.525	N	
CHRISTIANSBURG	WR4	52.03	53.03	N	P
DANVILLE	K4AUG	52.13	53.13	N	P
LEXINGTON	WR4BCI	52.01	53.01	N	
NORFOLK	WR4ATK	53.525	52.525		
PETERSBURG	W4LGG	52.55	53.55	N	C
TAZEWELL	WA4QKH	52.05	53.05		P

220 MHZ

GALAX	WR4	222.74	224.34	N	P
TYSONS CORNER	K4GCM	222.34	223.94	N	

450 MHZ

ALEXANDRIA	WR4AAG	439.25	427.25	M	V
ALEXANDRIA	WR4ANC	449.60	444.60	M	
ANNANDALE	WR4AQG	444.85	449.85	M	
CHARLOTTESVILLE	WR4AYG	444.25	449.25	N	
CHESAPEAKE	WR4	449.95	444.95	N	P
FALLS CHURCH	WB8CRK	449.45	444.45	M	
FT. BELVOIR	WR4ATJ	444.125	449.125	N	
LYNCHBURG	WB4IUS	449.50	444.50		T
PARIS	WR4ANJ	444.80	449.80	N	
PETERSBURG	WR4BBU	449.50	444.50	N	P
RICHMOND	WA4ONG	449.85	444.85	N	P
ROANOKE	WR4AFY	442.50	447.50	N	L
TAZEWELL	WA4QKH	448.90	443.90		P
TYSONS CORNER	WB6GUS	443.50	448.50	M	P
TYSONS CORNER	K4LHB	444.75	449.75	M	
WOODBRIDGE	WR4AII	444.90	449.90	M	

SOUTH CAROLINA REPEATERS

220 MHZ

COLUMBIA	WB4URY	222.30	223.90		
GREENVILLE	W4FHJ	222.46	224.06		
GREER	W4ILY	222.38	223.98	N	PA
SUMTER	WR4AUS	222.34	223.94	N	C

450 MHZ

ANDERSON	N4JK	439.25	427.25	N	C
CHARLESTON	N4SC	449.10	444.509		T
SUMMERVILLE	WR4	449.00	444.00	N	P

6 METERS

COLUMBIA	WR4	52.05	53.05	N	

10 METERS

ANDERSON	N4JK	29.53	29.63	N	

REPEATER SYMBOLS

N	NON Member CVRA	L	Linked
A	Autopatch	C	Under Construction
PA	Private Autopatch	P	Proposed Repeater
EA	Emergency Autopatch	O	Off Air Temporarily
T	Tone Access	V	Television
M	T-MARC Repeater	R	RTTY

SOUTH CAROLINA REPEATERS

TWO METERS

ANDERSON	WR4AIO	146.37	146.97	N	PA
CHARLESTON	WR4	146.10	146.70	N	P
CHARLESTON	K4ILT	146.16	146.76		A
CHARLESTON	K4ESG	146.19	146.79	N	C
CHARLESTON	N4SC	146.34	146.94		T
CHARLESTON	WR4BCP	147.87	147.27	N	A
CHERAW	WD4HEH	147.735	147.135		
COLUMBIA	WR4AYE	146.16	146.76		
COLUMBIA	K4AVU	146.28	146.88	N	
COLUMBIA	WR4ACD	146.34	146.94	N	
COLUMBIA	WR4	147.255	146.835	N	
COLUMBIA	WR4AYE	147.84	147.24		
COLUMBIA	WB4VLY	147.93	147.33		
DORCHESTER	W4NAT	147.78	147.18		
EDMUND	WR4ACD	147.96	147.36	N	A
FLORENCE	W4ULH	146.25	146.85		
FLORENCE	WR4AGM	146.37	146.97	N	PA
FT MILL	WR4ABK	147.78	147.18		
GASTON	WB4NEP	144.61	145.21		A
GREENVILLE	WR4ADG	146.01	146.61	N	
GREENVILLE	W4AZT	146.10	146.70		PA
GREENVILLE	WR4ADG	146.22	146.82	N	A
GREENVILLE	K4AWB	147.645	147.045	N	P
GREENVILLE	WR4	147.675	147.075	N	PA
GREENWOOD	WR4AUE	147.765	147.165		PA
GREER	W4IQQ	146.34	146.94		
LANCASTER	WC4AAW	146.10	146.70		PA
LAURENS	WA4UZA	146.25	146.85		A
LITTLE MT	K4AVU	147.81	147.21		C
LONG MT	WA4JRJ	147.87	147.27		
MARION	W4YLT	146.40	147.00		
MYRTLE BEACH	WR4AXC	146.01	146.61	N	
N. AUGUSTA	WR4ABB	146.13	146.73		
N. AUGUSTA	WR4ALS	147.93	147.33	N	
ORANGEBURG	WR4AQY	147.69	147.09		A
PICKENS	WR4ADP	146.40	147.00		
SAVANNAH (GA)	W4HBB	146.28	146.88		
SAVANNAH (GA)	W4HBB	146.37	146.97		A
SPARTANBURG	WR4BDT	147.69	147.09	N	PA
SUMMERVILLE	WR4	146.25	146.85	N	C
SUMTER	WR4AOI	146.04	146.64		PA
SUMTER	WR4BCM	147.615	146.015		
SUMTER/SHAW	WR4AUS	147.66	147.06		
TOCCOA (GA)	WA4LUC	146.19	146.79		
WHITE HALL	WR4AQL	146.31	146.91		
YORK CO. C.D.	WC4ABD	146.43	147.03		PA

TENNESSEE REPEATERS

TWO METERS

ALAMO	WR4API	147.135	147.735	W
ALCOA	WR4APM	146.25	146.85	E
ALTAMONT	WR4AWN	146.37	146.97	CN
BRISTOL	WR4AFZ	146.28	146.88	NE
BRISTOL	WR4AXQ	147.60	147.00	NE
BROWNSVILLE	WR4ASI	146.655	146.055	SW
CHATTANOGA	K4CMY	146.01	146.61	SE
CHATTANOGA	WB4UDX	146.19	146.79	SE
CHATTANOGA	WR4AFS	147.60	147.00	SE
CLARKSVILLE	WR4AOO	147.60	147.00	CN
CLEVELAND	WR4AQV	147.78	147.18	SE
COLUMBIA	WR4AIX	147.72	147.12	CN
COOKEVILLE	WR4ANW	146.07	146.67	E
COOKEVILLE	WB4QSJ	147.81	147.21	E
COVINGTON	WR4BBC	147.93	147.33	SW
CROSSVILLE	WR4	147.93	147.33	E
DAYTON	N4OU	147.99	147.39	SE
FAYETTEVILLE	WR4RAO	147.63	147.03	S
GALLITIN	WR4BCX	147.84	147.24	CN
GREENVILLE	WR4AHP	146.10	146.70	E
GREENVILLE	WA4LYF	147.66	147.06	NE
HENDERSONVILLE	W4KKO	144.89	145.49	CN
HENDERSONVILLE	WR4BCX	147.63	147.03	CN
HOHENWALD	WR4	147.93	147.33	W
JACKSON	WR4AQN	147.81	147.21	W
JOHNSON CTY*	WR4AIP	146.19	146.79	NE
JOHNSON CTY*	WA4DIU	147.87	147.27	NE
KINGSPORT	WR4ADO	146.16	146.76	NE
KINGSPORT	WR4AGE	146.37	146.97	NE
KNOXVILLE	WR4AIA	146.01	146.61	E
KNOXVILLE	WR4ADF	146.34	146.94	E
KNOXVILLE	WR4AHF	146.40	147.54	E
KNOXVILLE*	WR4APU	146.13	146.73	E
LAFOLLETTE	WR4AKW	146.07	146.67	E
LEBANON	WR4BBM	146.13	146.73	CN
MADISON	WR4AKN	146.04	146.64	CN
MANCHESTER	WR4ACI	146.10	146.70	CN
MEDINA	K4BEZ	146.37	146.97	W
MEMPHIS	WR4	144.89	145.49	SW
MEMPHIS	WR4AHK	146.01	147.51	SW
MEMPHIS	WR4AYR	146.04	146.64	SW
MEMPHIS	WR4AOG	146.10	146.70	SW
MEMPHIS	WR4AGR	146.13	146.73	SW
MEMPHIS	WR4ABS	146.19	147.51	SW
MEMPHIS	WR4AHO	146.22	146.82	SW
MEMPHIS	WR4AZK	146.25	146.85	SW
MEMPHIS	WA4ETE	146.28	146.88	SW
MEMPHIS	WR4AEX	146.34	146.94	SW
MEMPHIS	WR4BLJ	146.40	147.00	SW
MEMPHIS	WR4AXF	146.46	147.06	SW
MEMPHIS	WR4BCU	147.63	147.03	SW
MEMPHIS	WR4AWT	147.67	147.09	SW
MEMPHIS	WB4DAZ	147.72	147.12	SW
MEMPHIS	WR5AII	147.75	147.15	SW
MEMPHIS	WR4	147.78	147.17	SW
MEMPHIS	WR4AZC	147.87	147.27	SW
MEMPHIS	WR4ASF	147.90	147.30	SW
MEMPHIS	WR4ATA	147.96	147.36	SW
MEMPHIS	WR4ASR	147.99	147.39	SW
MORRISTOWN	WR4	147.63	147.03	E
NASHVILLE	WR4AWV	146.01	146.61	CN
NASHVILLE	WR4AKN	146.07	146.67	CN
NASHVILLE	WR4ACS	146.16	146.76	CN
NASHVILLE	WR4AFA	146.19	146.79	CN
NASHVILLE	WR4ABV	146.25	146.85	CN
NASHVILLE	WR4ACY	146.28	146.88	CN
NASHVILLE	WR4AGX	146.34	146.94	CN
NASHVILLE	AI4P	147.615	147.015	CN
NASHVILLE	WR4AUX	147.75	147.15	CN
NASHVILLE	WB4HFS	147.78	147.18	CN
NASHVILLE	WB4ZSA	147.90	147.30	CN
NASHVILLE	WR4BBT	147.945	147.345	CN
NASHVILLE	WR4AKN	147.96	147.36	CN
NASHVILLE	WR4	147.975	147.375	CN
NEWBERN	AA4HF	146.745	146.145	NW
OAK RIDGE	WR4ADQ	144.85	145.45	E
OAK RIDGE	WR4AGJ	146.22	146.82	E
OAK RIDGE	WR4AGL	146.28	146.88	E
OAK RIDGE	K4EAJ	147.72	147.12	E
PARIS	WR4AYM	147.96	147.36	NW
SAVANNAH	WA4HGN	146.31	146.91	W
SHELBYVILLE	WR4AQM	147.66	147.06	S
SHORT MT.	WR4AZF	146.31	146.91	CN
SPARTA	W4BSA	147.69	147.09	CN
SPRINGFIELD	WR4AGH	147.63	147.03	N
UNION CITY	WR4AUQ	146.10	146.70	NW
UNION CITY	K4MVE	146.655	146.055	NW
WAVERLY	WR4AYB	146.685	146.085	W
WINCHESTER	WR4AFH	146.22	146.82	S

WILLIAMS RADIO SALES

Unconditionally Guarantees Its Two-Meter and 220 Mhz. Bomar

CRYSTALS

They work Perfectly or we Replace - at NO Charge!

WE STOCK OVER 461 DIFFERENT PAIRS FOR:

- **WILSON**
- **YAESU**
- **REGENCY**
- **ICOM**
- **DRAKE**
- **STANDARD**
- **KENWOOD**
- **MIDLAND**
- **CLEGG**

We Ship Orders Within 24-Hours (Assuming in Stock)

STOCKING All Standard Repeater Pairs,
Many Split/Splits and some Sub Band.

We can Special Order For Other Rigs Not Listed Above
(3 Weeks Estimate For Delivery)

$8.00 PAIR - 6 PAIR (or More) - $7.50 PAIR

Price Includes 1st Class Postage if Order Accompanied by Check
N.C. Residents - Add 4% Sales Tax.

Now! The Largest Mail-Order Crystal Distributor in The Southeast.

WILLIAMS RADIO SALES

NORTH CAROLINA
WAYNE C. WILLIAMS K4MOB
RT. 1, BOX 806, COLFAX, N. C. 27235
PHONE (919) 993-5881 AFT. 5 P.M. AND WEEKENDS

CALL TODAY!
IMMED SHIPMENT
ON IN-STOCK PAIRS
Ask A Friend About Our Service

We Ship Anywhere - 1st Class
Dealers! Call For Prices.

Now...The Rush Begins...

We've just finished a three day check over and changeover of the Frequency Index for the May Journal. This long check-out occurs every year for the May issue.

The problems occur because in February, we have new members coming in from the first of the year, old members renewing from the past year, and others who are late getting things in the mail. Consequently, due to deadlines for the Journal falling in January, we do not try to correct membership status of the Journal index.

Then comes the May issue. We have to go back and see that every membership form for 1979 is checked off. After all are credited with membership, we have to go back and mark that "N" beside all the rest.

It hurts to place the "N" beside many repeaters. We know they are CVRA supporters and will join as seen as they see the new index reminding them that we don't have their renewal as of yet.

It is human nature to lay something aside, and equally as easy to forget to get an application mailed in. This is what has happened again this year. We wish there was another way of reminding repeater clubs and owners that they haven't renewed yet. But each representative gets a new application in the November issue, which is about the only reminder we can afford to send out, due to personnel and mail costs.

When this Journal hits the mailboxes, there will be lots of surprised Repeater trustees when they see that "N". Lots will fill out the application which has laid on the desk for so long and others will delay even longer. We hope all of you will take this reminder and go ahead and get your $8.00 membership fee sent in. (There is no reduction in price for renewing late).

While we spent hours checking the list, there is a chance we mistakenly omitted someone who has renewed and we didn't catch it. We try very hard to check, re-check and check again, but when you are looking over lists involving over 275 repeaters, they get to running together after a while.

Sometimes a trustee will send in renewal and incomplete information on the application will cause us to miss a repeater he also operates on another band. When filling out the application, everyone take the time to fill in every blank, and include every repeater in which they operate, this will make our job more accurate.

Some repeater clubs make notations about nets and club meetings on the renewal applications. This usually gets missed, or is noticed after we have finished the pages these notes belong on. The best way to get corrected information of that nature in the Journal is to send it to the editor, or your State District Director.

I might mention some changes we also plan in the index. Repeater trustees are now asked to send changes for their machine listings to their Director, or the Frequency Coordinating Chairman. the reason for this: the indexes for the coordinating committee and the Journal have been consolidated into one list and the Frequency coordinating chairman is now taking care of making corrections and sending them to Lindsay to enter into the computer for our index printouts.

To clarify things for you, remember if it's NEWS, send it to the Editor. If it's a repeater change in listing or coordination, contact your Director. It it's membership send it to the Membership Chairman.

While I'm rambling, I might also mention that Full Membership and Associate Membership are two different things. We have had some new repeater owners join the CVRA, pay their $3.00 Associate Membership fee and complain because their repeater was listed as a non-member. Associate Memberships at $3.00/year are for repeater users. Full Membership is available only to Repeater owners, trustees, or clubs who have a repeater on the air. Membership fee for Full membership is $8.00/year. Two assigned repeater representatives get the Journal through Full membership.

I know its confusing to most of you as to where to send what. But consider how confusing it gets to us when we get information which belongs to some other officer of the organization, but we'll continue trying to relay as much as possible for you. Your Director can be most helpful in giving you guidance as far as Full and Associate membership, news, repeater information and coordination. He and his assistants in your District are ready and eager to help you. Their names are listed on the back cover of the Journal. Get to know them. Let them get to know you.

Wayne, K4MOB

CVRA RATED ONE OF TOP FOUR

The Journal has learned that the ARRL in correspondence to various councils across the Nation lists the CVRA among the top four Repeater Organizations in the country.

The ARRL often get inquiries and questions from groups wishing information about other Councils, and how to pattern an organization into a coordinating group.

NORTH CAROLINA CLUB MEETING CALENDAR

ASHEVILLE - W. Carolina ARS-Bus. 1st Thur. 1900-conf. ru. Health & Soc. Bvc. Bldg. Dinner, 2nd Monday, 1900 - Hungry Bull, Patton Ave.
BENSON - Johnson ARS 3rd Thur. 1930 at 50-210 Fire Station
BURLINGTON - Alamance ARC 2nd & 4th Monday 1930, at 230 E. Summit Ave.
BURLINGTON - Alamance Repeater Assoc. Inc. Last Sat. 1900 at B & J Cafeteria
CARY - Cary ARC 4th Thur. 1930 at White Plains Methodist Church
CHARLOTTE - Mecklenburg ARS Last Tue. 1930-Red Cross Bldg on Park Rd.
CHARLOTTE - Charlotte RC 1st Thur. 19 - Club Bldg. - WSOC-TV Tryon St.
CHARLOTTE - Friday Lunch Group Fri. 1200 - Mediterranean Rest. on Independence Blvd.
CONCORD - Cabarrus ARS, 3rd Mon., 1930, Kimball Memorial Lutheran Church, Aux. Bldg., Kannapolis
DURHAM - Durham FM Assoc. - 2nd Tue. 1800 - Picadilly Cafeteria, S. Sq. S.S.
DURHAM - Triangle Radio Alert Network - 3rd Thurs. 1800 Picadilly Cafeteria, S.Sq. S.S.
EDEN/REIDSVILLE - Rockingham County ARC 1st & 3rd Mon., 1900 Wentworth Courthouse
FAYETTEVILLE - Cape Fear ARS 3rd Mon. 1900 - Methodist College,
FRANKLIN - Franklin ARC, 2nd Thur. 1900 - Macon Savings & Loan Assn.
GASTONIA - Gaston Cty. ARS - 1st Mon. 1900 - Community room at Eastridge Mall
GREENVILLE - Brightleaf ARC - 2nd Tues. 2000 - Planters Nat. Bank, downtown.
GREENSBORO - Greensboro ARA, 4th Mon., 1830, Founders Hall, Guilford College
GREENSBORO - Greensboro RC Fri. 1930-Club House near Friendship Airport
GREENSBORO - Ladies in Amateur Radio Soc. 1900 2nd Tues., Mbrs. Home, 4th Tues, Apple House Cafe
HIGH POINT - High Point ARC Tue. 1930 - Old Mill Rd.
JACKSONVILLE - Onslow ARC 2nd Sat. 1000 - Howard Johnsons Restaurant
KANNAPOLIS - Cabarrus County ARS 3rd Mon. 1930, Activity Bldg., Kimball Memorial Lutheran Church
LAURINBURG - Scotland County ARS 1st Wed. - Cablevision Office
LEXINGTON - Healing Springs Mt. VHF Soc. Last Mon. 1930 - Burlington House Furniture Co., Personnel Office
LUMBERTON - Lumberton ARC, 3rd Thu. Robeson County Public Library at 1930
MORGANTON - Morganton ARC, 1st Mon., 1930, W. Piedmont Community College
NEW BERN - New Bern ARC, 3rd Thursday, 1930, Golden Corral Steak House
RALEIGH - Raleigh ARS - 1st Wed. 1930 - W. Community Room, Crabtree Valley Mall
ROCKY MOUNT - Rocky Mount ARS, 3rd Thurs., 1900 Farmer's Restaurant in Sharpsburg
SALISBURY - Rowan ARS & 4th Mon. 2000-Salisbury City Hall, Main Street
SHELBY - Shelby Radio Club 2nd Mon. 1830 Hungry Bull Restaurant, Dutch Supper
SILVA - Smokey Mt. ARC, 2nd Tue. 1900 - Southwest Tech. Institute
STATESVILLE - Iredell City ARS - 2nd Thurs. 1900 - Hall of Justice, Water & Tradd Sts.
WILMINGTON - Wilmington VHF Assn., 2nd Tue. of Jan. and all odd months, at Caro. Savings & Loan; Even Months, Social Meet at New Hanover Mem. Hosp. Ed. Bldg.
WINSTON-SALEM - Forsyth Amateur Radio Club, 2nd Friday - Nature Science Center

SOUTH CAROLINA

CALENDAR Continued on Next Page

ANDERSON - Anderson RC 4th Thur. 1930 - Anderson County Library
CHARLESTON - Holiday VHF Soc. 2nd Wed. 2930 - Pinehaven Shopping Center Meeting Room
CHARLESTON - Charleston ARS, Inc. - Home Federal Meeting Room, Ashley Plaza S.S.
CHARLESTON - Trident ARC, 3rd Wed. 1930 - Park Cir. Presy. Church.
CHERAW - Chesterfield Cty. ARS. 3rd Tue. 1900 Chesterfield Tech.
CLEMSON - Clemson Univ. ARC - (During school year - posted prior to meeting)
COLUMBIA - Columbia ARC (formerly Carolina Rep. Sec.) 1st Mon. 1930, S.C. Elec. and Gas Bldg.
FLORENCE - Florence ARC, Shoneys, 1st Tues. 1930
FLORENCE - Florence FM Repeater Assn. 3rd Mon. 1930 Florence Darlington Technical Center
GREER - Greer ARC 1st Mon. 1930 Meeting Location announced monthly,
GREENVILLE - Blue Ridge ARS 1st Tue. 1930 Red Cross Building 3rd Tues. Dinner.
GREENVILLE - The Dutch Lunch Club - Mond. S & S Cafeteria at 1245.
GREENWOOD - Piedmont Tec ARC, 1st Mon. 1930 at Piedmont Tec.
KEEOWEE - Keeowee, Toxaway ARC, 3rd Tues. at Keeowee Toxaway Vistors Center
LANCASTER - Lancaster Cty. ARC, 3rd Thurs. 1930, at Standard S & L. Hywy 9 bypass.
LAURENS - Care. Computer and ARA, 1930, 2nd Fri. Gen. Meet; 4th Fri Digital workshop
ORANGEBURG - Orangeburg ARC - 2nd Thur. 1930 - Quincy's Fam. Steak House
SUMTER - Sumter Repeater Assn. 3rd Mon. 2000 City/County Office Building Conference Room
WALTERBORO - Coastal Amateur Radio Assn. 2nd Sat. 1900, meeting announced on 31/91 net.

VIRGINIA CLUB MEETING CALENDAR

ALBERTA - Southern Piedmont ARC - 3rd Thurs. 1900, Southside Va. Comm. Col.
BLUEFIELD - East River RC, 1st & 3rd Monday, 1930 at Commercial Bank, Bluefield.
CHARLOTTESVILLE - University of Virginia ARC every other Thurs., 1930 Thornton Hall, W4UVA
CHARLOTTESVIOLLE - Albemarle ARC 2nd Wed. 1930 at City Courthouse on 4th Street NE, WA4TFZ
COVINGTON - VHF Communications Assn. - 2nd Wed. 1930 at different mbrs. homes
DANVILLE - Danville ARS, 1st & 3rd Friday, 1930 Danville Comm. Col.
FARMVILLE - Southside ARS, 1st Thursday 1930, Hampton-Sydney Col. Farmville, Virginia
HAMPTON - Southern Peninsula AR Klub (SPARK) 1st, 3rd Wed. 1930, VEPCO Bldg.
LYNCHBURG - Lynchburg ARC 2nd. Fri, 2000, (Meeting place being Changed)
MARTINSVILLE - Patrick Henry ARA, 3rd Tues., 1930, 1st National Bank of Martinsville and Henry Ctr.
NEWPORT NEWS - SPARC 1st & 3rd Wed. 1930 at Vepco Building in Hampton,
NORFOLK - Hampton Roads Radio Assn., 2nd Thurs., 2000 Larchmont Library, Hampton Blvd.
NORFOLK - Tidewater ARC, 2nd & 4th Sat., 1000, Fort Norfolk, Hampton Blvd.
PETERSBURG - Crater ARS - 4th Wed. 1930 John Tyler Community College
PORTSMOUTH - Portsmouth ARC, 2nd and 4th Thurs. 432 Broad Street
RICHMOND - (RATS) 1st & 3rd Fri. 1930 at the stone house in Forrest Hill Park.
RICHMOND - Richmond ARC, 2nd Friday, Stone House, Forest Hill Park
ROANOKE - Roa. Valley ARC 2nd & 4th Fri., 2000 - Colonial Ave. Presby. Church.
VIRGINIA BEACH - Virginia Beach ARC, 1st Thur. 1900 at Virginia Beach Recreation Center.
WINCHESTER - Shenandoah Valley ARC 1st/3rd Fri. 2000 Club Building on Grace Street.

GBO-GUILFORD COUNTY ARES ISSUES ROSTER-HAS MEET

Bill Lundy, KB4IZ has released a complete Greensboro-Guilford County (N.C.) A.R.E.S. Membership roster. The list contains the names, addresses and phone numbers of 96 active members of the local ARES group. Lundy, Civil Preparedness Coordinator has been quite active in obtaining new memberships for the group.

The local Greensboro 72-12 repeater is the communications base, with a special communications room aside from Greensboro City communications set up for Amateur emergency communications. The room has status boards, direct phone link into the City Comm. center, and 2-meter transceivers.

Last month the group met at the Governmental center and heard a representative from the Weather Bureau explain how the new Weather Station atop Sauratown Mt. works, and how they record and feed information to the weather station from their studies at the Greensboro-High Point Regional Airport.

The group also discussed with the Weather representative the possibility of setting up Amateur Radio capabilities at the Weather Bureau to be used in case of severe weather during the Tornado and Hurricane season. The main system would involve the 72-12 repeater, but long range reports would be worked through the Sauratown 220 mhz. repeater and several other 2-meter repeaters in the local area. Details remain to be worked out, but several repeater groups are working together with Lundy to iron out details of passing weather information across repeaters without actual linking, to ultimately reach the weather bureau.

Lundy was named EC for Greensboro-Guilford county, replacing Chuck Bino, K4CJZ. Bino was named SCM for North Carolina by the ARRL in January of this year.

CAROLINA REPEATER SOCIETY NOW COLUMBIA ARC, INC.

-Bob McCormick, K4FRX

The Carolina Repeater Society has adopted a new Constitution and By-Laws. Among other things, the new Constitution changes the South Carolina club's name to the Columbia Amateur Radio Club, Inc.

The club's officers will remain the same for the remainder of the year. Al Link, K4ICL is President, with Jim Robb, WA4KXD, VP; Bill Weathersbee, WB4UGV, Sec.; and Al Edwards, WB4KQJ, Treasurer. Doug Welborn, K4LNU is trustee of the club's repeater.

The Columbia ARC will sponsor a hamfest in Columbia this month. It will be held on the weekend of the 12th and 13th (May) at the National Guard Amory, on Bluff Road near the Fairgrounds.

FCC exams will be given on Saturday morning. The club reports the hamfest will have plenty of parking available and will feature the usual hamfest festivities-dealers, flea market, programs, etc.

The FCC exams will be walk-in at 8 a.m. with no advance registration required.

321 KATHERINE STREET
EASLEY, S.C. 29640
(803) 855-1451

Rich TRONICS

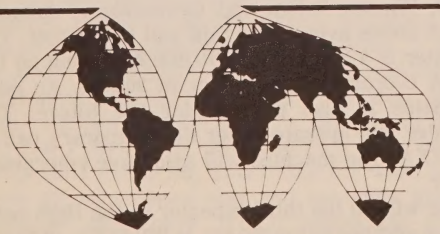
AMATEUR & HOBBY ELECTRONICS SALES AND SERVICE

MIDLAND INTERNATIONAL

YOUR 220 HEADQUARTERS IN SOUTH CAROLINA

Special Mod. 13-509 $159.00

Join Your Friends on 1¼-Meters
The Easy Way With A Midland



DECIBEL PRODUCTS

MOBILE ANTENNAS
STATION ANTENNAS
REPEATER DUPLEXERS

R.E. (RICH) TILLOTSON WA4SSJ
(803) 855-1451

NRAO MEETS WITH AMATEURS CONCERNING QUIET ZONE

-by Carter Cogle, K4ARO

Representatives of the National Radio Astronomy Observatory met with selected representatives of the Amateur Community in March to discuss mutual problems and reasons for the Proposed Rulemaking destined to draw Amateur Radio into the "Quiet Zone" if passed by the FCC.

Several hours of discussion ended with nothing gained, except the NRAO officials planning a "wait and see" attitude in reference to the outcome of the FCC RM docket. The Amateurs explained in detail how the "quiet zone" would hamper Amateur Emergency communications and how Virginia governmental radio was inadequate to cover areas in the zone.

I received a letter from Reginald D. Atkins, Interference Officer for NRAO in late March. In his letter to me representing the Virginia District of CVRA and of the Districts location partially within the Quite Zone, Atkins requested a person be named as part of a committee with which NARO and NRL may interface with Amateur radio.

The letter read in part: "NARO and NRL would like to form a committee with which they may interface with Amateur Radio. The purpose of this committee is to allow the radio Amateur affected by the National Radio quiet zone requirements to have a voice in the installation of new repeaters within the zone as well as to assist in the control of interference of present repeaters and Amateur signals."

"We would like to have a member of your organization on this committee because of your location within or near the zone or because a present repeater in your area is causing harmful interference to the observatory."

"Please advise at your earliest convenience if you will provide a representative for the committee."

I have named Danny B. Hill, WA4HTI of Covington, the WA4HTI Covington Repeater Trustee as the main representative, and Gordon P. Batey, WA4FJC, Quiet Zone chairman of the Valley ARA in Staunton as alternate.

The NRAO said they would announce time of first meeting to be held at Green Bank.

DAFFYNITIONS

Speedy QSOer Getoutus—The guy who gives his call the minute he starts driving, gets a call, and immediately says he's at his destination and must QRT.

WHAT MIGHT BE EXPECTED IN THE QUIET ZONE COVER

-by Wayne C. Williams, Editor

What we feared if the FCC approves the inclusion of Amateur Radio into the NRAO/NRL Quiet Zone as far as limitations comes about as we expected.

I was reading the Lynchburg (Va.) ARC news "LARC BULLETIN". In it is a description of how William "Jack" Warren WB4MDC of Lynchburg met with representatives of Sugar Grove and expressed a desire to put up a repeater in the Tobacco Row Mountain area. Sugar Grove told him they would cooperate by telling him where they could locate the repeater, amount of power which could be run and what type tower. The representatives gave Warren a topographic map of the area marked with the sites and powers that could be used. One example of their recommendation was "447 Mhz, 50-foot tower, 10.0 watts maximum ERP to Sugar Grove."

There were several such coordinates marked on the map, all very restrictive.

You'll note they said "Effective Radiated Power' also.

HIGH POINT ARC (NC) REORGANIZE S-ELECTS OFFICERS

-by Wes Jones, WD4 EMX

The High Point Amateur Radio Club is once again fully active and holds monthly meetings the second Tuesday of each month in the Conference Room at the High Point Enterprise Newspapers, at 7:30 p.m. Any Amateurs in the area interested in joining, are invited and welcome.

New officers elected for the club are: Jim Floyd, WA4ZXA, Pres.; Dave Rawley, N4XO, VP; Tom Ellis, WA4CBC, Sec.; and Wes Jones, WD4EMX, Treas.

By the time you read this Journal, the club repeater should be in operation from the Elm Towers on South Main Street in High Point. Good coverage is expected in all areas of the Tri-Ad (High Point, Winston-Salem and Greensboro). Antenna height above average terrain will be 150-feet. The repeater is a Spectrum SCR-1000 operating on the CVRA coordinated frequency of 265-865. An open autopatch is also planned for the future. The repeater will operate under the temporary call of WA4ZXA. The machine will also have emergency power.

This will be the third repeater in the High point area in addition to the 265-865, is WR4AFV, 19-79 and K4AZA, 40-00.

NO ONE ELSE TO BLAME BUT . . .

Continued From Page 1

the organization. I wonder if this is fair? Obviously everyone cannot do a job that makes everyone else happy.

I can speak for the present officers and directors of the CVRA . . . I think we have the most dedicated group of people wishing to give their time and talents to this worth-while organization I have ever seen. Each year we learn a little bit more and as new officers and directors come into the folds of leadership, they are helped tremendously by the "old hands".

Computerizing the Frequency Charts and the able leadership of our new frequency coordinating chairman has put the CVRA in a position that we have worked to attain for years. Information flow to officers and directors is at an all-time high. The Directors know what is going on throughout the CVRA territory. This helps!!

Each Director of the CVRA is trying . . . hard, to do a job that he knows needs to be done. He won't always be right. He won't always make all parties happy. But he will make decisions based on information available that he feels is the right decision and best for all parties concerned.

I as Editor of the CVRA Journal am the voice of the organization. You probably recognize me more than any other officer of the CVRA, which is only natural.

I suggest each of you who own repeaters or are involved with repeaters to get to know your State Director. He is working for you and was chosen by you to lead the District in which you live.

I've said before many times, the day of the interference-free channel is past. Even the sub-bands are filling up fast. Your idea of what may be a good frequency choice for a location may not be the best choice available. The State Director may make a mistake sometimes in coordination. As I said, he was trying with information available to do the right thing. If he is wrong, accept it and work with him at righting the wrong.

Finally, those of you who have a complaint or a chip on your shoulder involving the CVRA . . . write me and tell me about it. Lets try to resolve the differences and be friends. The CVRA may not be what everyone wants it to be . . . but it's all we've got, and I personally think the boys have done a pretty good job so far. Don't take my word for it. Drive off somewhere else and see what kind of conditions they have. You'll appreciate CVRA territory even more!

-Wayne C. Williams. Editor

VIRGINIA BEACH AREA HAMS PROVIDE COMMUNICATIONS

-By Neil Newstein, WD4RDF

On March 17, 1979 the Amateur radio operators of the Virginia Beach ARES and the Dam Neck Radio Club celebrated St. Patricks Day by providing radio communications to the 7th Annual Shamrock Marathon. The Marathon is a annual 26 mile running event held along the ocean front resort area of Va. Beach. 7th Annual

19 OM's and one YL participated. A communications headquarters was set up at the race starting point with antennas placed 8 stories up on the roof of the headquarters hotel. Communications were maintained over the two loops of the race course, the longest distance being approximately 10 miles into a state park. Over one three mile stretch of the course, a bicycle mobile unit was used since the foot path that the runners utilized was inaccesable to motor vehicles. Other sections of the course where severe traffic was encountered (spectators numbered in excess of 30,000) used a motorcycle mobile unit, and boardwalk sections were of course handled by operators using HT's. Two separate simplex frequencies were used with coordination between the two net controls in the communications center handled by George Schmidt WA4GDB.

Liason within the center was also maintained with the first-aid and rescue people through John Roberts WA4AXY who also acted as the Red Cross dispatcher.

The coordination came in handy as one runner complained of chest pain, numbness, and other symptoms of possible heart problems. An ambulance and CPR team was immediately dispatched, and provided the needed assessment and transportation to a nearby hospital.

Amateurs also found themselves providing transportation back to the starting point for a number of the over two thousand participants who just could not finish the grueling 26 mile run.

Hams participating were: George Schmidt WA4GDB, Team Leader, Neil Newstein WD4RDF (EC Va. Beach) asst. team leader, Bob Forester N4AYE, John Roberts WA4AXY, Sperry Davis N4SD (EC Norfolk), Pete Williams WA8MXX/4, John Janssen WA4WKY, Robert Taylor WA4AXT, Dan Levine WA2CLP, Mike Settles WA4UHX, Phil Harbin WD4NED, Carl Kent WD4 MIZ, Art Bartlett WA1KRM/4, Bob Reigh WB3DNO/4, John Rozich WA4TEG, Wally Burkett WA4KXV, George Ikonen WD4NEE, Ken Wiltshire K4HBE, Ron Young W8RJL/4, and Ashley Settles.

GEORGETOWN COMMUNICATIONS

1074 PATTON AVENUE • P. O. BOX 6843
ASHEVILLE, NORTH CAROLINA 28806

TELEPHONE 704/252-9815
CARL E. SMITH, N4AA

IN STOCK FOR IMMEDIATE DELIVERY

WE STOCK AMIDON TOROID CORES OF ALL TYPES

WE ALSO HAVE "HO" AND "N" GAUGE
MODEL RAILROAD SUPPLIES

"HAVING RIG PROBLEMS ?"

THEN, TAKE A MOMENT OF YOUR TIME TO CONSIDER THIS . . .

1. Has The Warranty Run Out on Your Rig?
2. Are you Prepared for it to Spend a Long While at the Manufacturers Shop?
3. Does the Prospect of Expensive Postage and Service Charges Upset You?

IF SO, CONSIDER THE ALTERNATIVES

EXPERT SERVICE WITH

BI-COMM

Expert Service offered On VHF , HF, AM, FM & SSB Gear Including DRAKE, COLLINS TEN-TEC, SWAN, WILSON, ICOM, YAESU, KENWOOD, STANDARD, HEATH AND OTHERS

DAILY 3 PM to 10 PM
SAT 9 AM to 4 PM

- **MINIMAL TURNAROUND TIME**
- **COMPETITIVE RATES**
- **SATISFACTION ASSURED**

BI- COMM

BINO COMMUNICATIONS, inc

K4CJZ CHUCK

WA4IHA SUE

KA4HIC KEN

2401 DEVEROW PLACE
GREENSBORO, N.C. 27407
PHONE (919) 292-8052

803
366·7157

G.I.S.M.O.
2305 CHERRY ROAD
ROCK HILL, S.C. 29730
GENERAL INTERNATIONAL SERVICES (METRO OUTLET)

803
366·7157

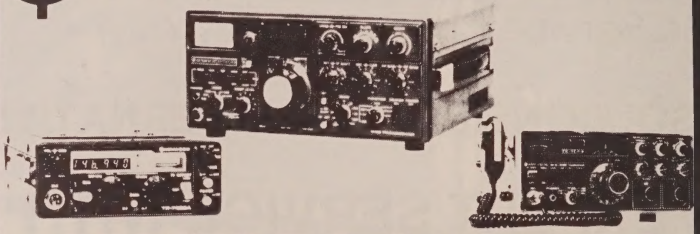
DRAKE

YAESU

DenTron

cushcraft

ANNOUNCING: KENWOOD



Larsen

ETO

hy-gain

COMES TO G.I.S.M.O.!

alda

HUSTLER

WE'RE PROUD TO ANNOUNCE THAT THE KENWOOD LINE HAS JOINED DRAKE, YAESU, ICOM, ETO, SWAN, DENTRON AND MANY OTHERS AT THE CAROLINAS' PREMIER HAM STORE. CALL US SOON FOR A QUOTE ON YOUR NEEDS.

SWAN ELECTRONICS

Wilson

KDK

ORDER TOLL FREE!
800·845·6183

G.I.S.M.O.
2305 CHERRY ROAD
ROCK HILL, S.C. 29730
803·366·7157 EXIT 66-B OFF I-77

ARRL-CVRA MEMBERSHIP PERCENTAGE IS UP

Associate and Full members of the CVRA in their applications, list whether or not they are members of the ARRL. There has been a slight increase in the percentage of CVRA members who also belong to the ARRL.

In March of 1979, of the 2,794 member entries of the CVRA, 1,977 are listed as ARRL members, representing 71% of the CVRA membership. This is compared to 69% in September of 1978, and 65% in March of 1978.

Total CVRA membership in September of 1978 was 2,506 as compared to 2,794 in March of 1979, representing a 9% increase in CVRA membership over the past 6 months.

In a district breakdown, September of 1978 saw the North Carolina District with 1465 members, South Carolina, 383 and Virginia 439. March 1979 figures reflect 1,598 in N.C.; 421 in S.C.; and 506 in Va.

In percentages, South Carolina had a 9.1% increase in CVRA membership in the past 6 months, while North Carolina increased by 9.2% and Virginia 8.7%.

Full member (repeater) memberships are down in May 1979 compared with December 1978 due to many members not renewing their membership as of yet. This is normal and usually is repeated each year. The CVRA Full Membership for the end of 1978 included 136 groups, representing over 160 repeaters. In May of 1979 we have new or renewed for the new year some 107 groups representing some 130 repeaters.

Memberships for the 1979 calendar year, although not as high as 1978 ended, are running slightly ahead of last year compared with the same month a year ago. We expect repeater memberships will hit an all-time high this year, possibly as many as 200 repeaters represented by the CVRA if memberships continue to come in.

'N' MEANS YOU HAVEN'T JOINED

The May Journal has updated memberships in the Repeater Index. If there is an "N" beside your repeater listing, it means you haven't joined for the 1979 Calendar year as a Full Member. Why not fill out your application form and send it with $8.00 Full Membership fee to Bill Page, WA4LWX. His address is on page two of the Journal.

If you have never been a Full member and wish to join, see your District director, or write Bill Page for an application. They will be glad to help you.

JOURNAL - FREQUENCY COORD. REPEATER INDEXES CONSOLIDATE

Over the past years, the frequency index published in the Journal was not exactly like the lists held by the various District Directors and the Frequency Coordinating chairman.

Al Ross, K4CAW, chairman of the Frequency Coordinating committee has agreed to consolidate the two lists to prevent errors in either listing and bring the two lists up-to-date together as one, with the assistance of W4IZI, Lindsay and the computer.

This will require certain reporting changes in the system. Any repeater group wishing to change the listing of his repeater in the Journal should now write his District Director and note that change. The district Director will note the change on his master printout and send the change also to the Frequency Coordinating Chairman who will mark his master list. Monthly, Ross will take his corrected master printout to Lindsay for updating on the computer. New corrected printouts will then be made and circulated to the District Directors.

At presstime, the Journal will get the latest update printout and publish directly from this list those repeaters and frequencies which are normally published. Special remote-base, linking and auxilliary frequencies will be kicked out of the printout for the Journal published list.

Another advantage of consolidating the list, Ross will have the name of the person authorizing the change or the name of the person wishing to place a repeater on the list.

The new system will delete duplications, and confusion from one list having entries not held by the other list.

Repeater owners can help by sending their District Director changes they wish in the index. Of course repeater news is still sent to the Editor of the Journal as well as the District Director. (editor)

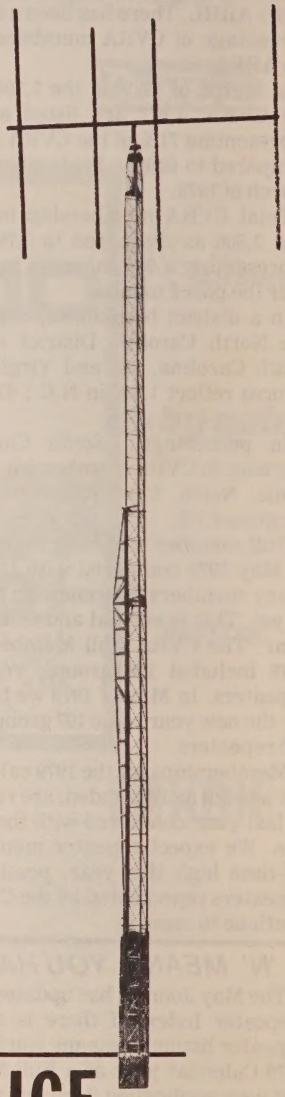
220 MIDLAND TRANSCEIVERS!

Crystals-Antennas

WILLIAMS RADIO

See Pages 4 & 5

ROHN & CONSOLIDATED TOWERS



Utility Poles Installed

Tower and Pole Accessories

Thrust Bearing

Rotor Plates

Guy Wires

Pole Steps

CDR Rotors

Crankup Telescoping Mast
(by consolidated)

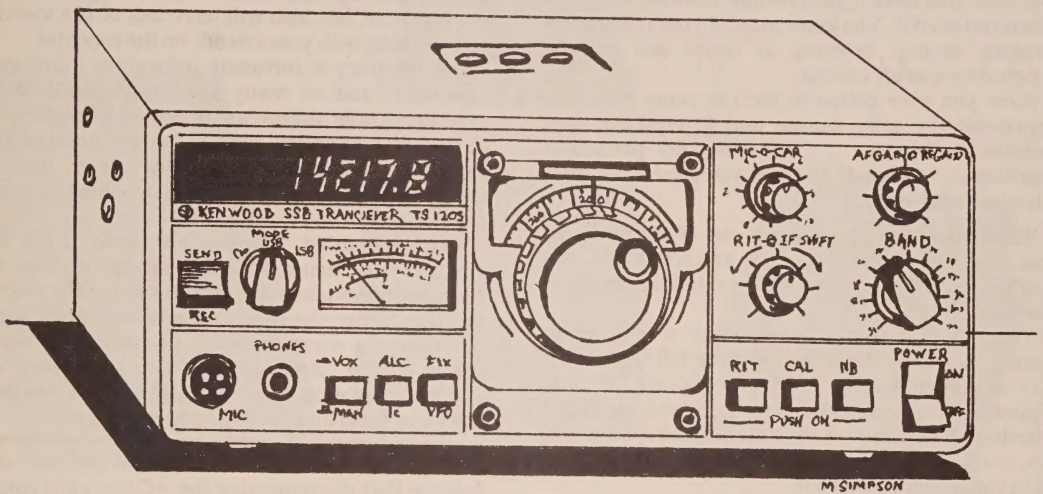
WE CAN DO THE JOB FROM START TO FINISH
LET US CHANGE OVER YOUR ANTENNA SYSTEM

WEST ANTENNA SERVICE

HARWOOD WEST WB4RLO
RT 6 BOX 529 - A
GREENSBORO 27405

COVERING TRIAD AREA ONLY
FREE ESTIMATES PHONE
919 - 621 - 9941

INTRODUCING - KENWOOD'S



·TS-120S·

LIST PRICE-- $699.00

OUR PRICE

$629.95 PREPAID SHIPPING

KENWOOD'S NEW 80-10 MTR, ALL SOLID STATE RIG
NO TUNING OR LOADING, DIGITAL DISPLAY, IF SHIFT
NOISE BLANKER, RIT, AND 200 WATT INPUT
COMPACT SIZE, ONLY 3½" x 9¼" x 13½

WE STOCK A COMPLETE LINE OF TOP NAME AMATEUR EQUIPMENT

CALL FOR QUOTE

Vickers

BANKAMERICARD master charge

P.O. BOX 8648 683-1597 520 EAST MAIN ST. DURHAM, N.C. 27707

HOME IS WHERE THE REPEATER IS . . . LETS HELP SUPPORT IT

Your Home repeater might be defined as the machine where you can be reached most of the time. The place you hang out. You respect this machine, and have a good feeling knowing it's there when you need it. You know most of your friends are hanging around listening at times and can be reached by merely calling.

Have you ever gotten in the car some morning, depressed the mike button and listened for that familiar kerchunk . . . but alas this particular morning . . . nothing? It gives you kind of an insecure feeling doesn't it?

When your home repeater is out of commission, you suddenly realize how vital and important this machine you have taken for granted so long has become to you.

Your home repeater is owned by a club, or in some cases individuals who foot the bill for electricity, make repairs, buy replacement parts, add new equipment, replace outmoded equipment and spend countless hours of their time making sure that when you start out in the morning, the machine is there with you, when you need it.

Have you ever offered support to your repeater owners? Do you know who they are? How well off financially are they in reference to maintaining a repeater?

You as a repeater user can be of great help to your home repeater owner by supporting him, helping on work details and maintenance, assisting in paying the bills or whatever way you feel you can. Everyone should support his own home repeater. Then as you travel around CVRA country, you feel free to use other machines, knowing that they are being supported by other individuals like yourself who call it their home repeater.

If a club owns your repeater, look into the possibilities of joining the club and participating in the activities and projects. You will be helping support the repeater, but also will have lots of fun meeting and working with your friends on the repeater.

Our territory is fortunate to have so many good repeaters, and so many good repeater users. A repeater is only as good as the people who operate it daily. Outstanding people make outstanding machines. Interesting people draw more users to the machines and make the machine a more popular frequency to use.

So keep in mind, your home repeater is one that you and your friends have made popular. Obviously the more users a machine in this area of the country has, the better the machine is. Fortunately we do not have an overpopulation problem here as do some of the larger cities. Our repeaters are generally available for our use almost anytime. Let's use them and above all support them.

SAFETY POINT TO PONDER - Do not ever assume that disconnecting the AC line cord from a high voltage power supply will kill it even if the capacitors have bleeder resistors. We had a fellow write us telling that he found an open bleeder resistor in a power supply on which he was working. The unit had no high voltage meter. In this case high voltage was still present on the high voltage capacitor and the tube! Always check for voltages in a power supply before any work begins and discharge any potentials that are present. People do not make good bleeder resistors! Remember - Ross Hull, the father of VHF was killed by electrocution. This should be a lesson to all of us.

CVRA JOURNAL ADVERTISING RATE CARD

(Effective 1-1-79)

	SIZE	PER ISSUE	CONTRACT PER ISSUE
INSIDE FRONT AND BACK COVER	6'' x 7½''	$60.00	$55.00
FULL PAGE	6'' x 7½''	40.00	35.00
ONE-HALF PAGE	6'' x 3¾''	22.50	20.00
ONE-QUARTER PAGE	2⅞'' x 3¾''	12.50	10.00
BUSINESS CARDS	Standard Size	9.00/yr. (In Advance)	
CLASSIFIED ADS	(30 word max)	1.75 per ad (In Advance)	
HAMFEST ADS	6'' x 7½''	35.00 (In Advance)	

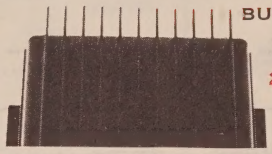
Second Color Ink per ad: $15.00
Total Ad Composition: $15.00 approx.
Artwork reductions/enlargements: $3.75 ea.
Reducing Camera Ready ad to fit specified size: $3.75

—Ken Holliday, WA4DYY
Sales Manager

LUNAR

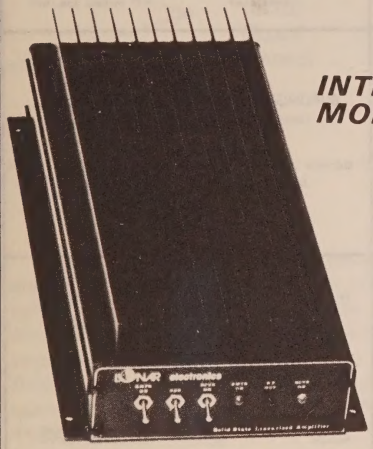
LINEARIZED AMPLIFIERS

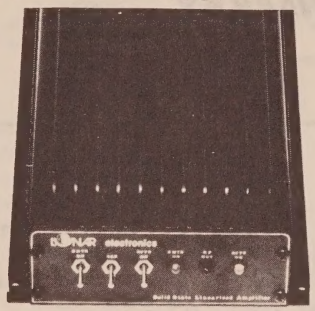
FOR 2 METERS
BUILT-IN RECEIVE PREAMPLIFIER



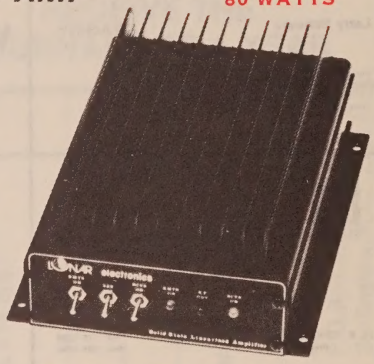
250 WATTS

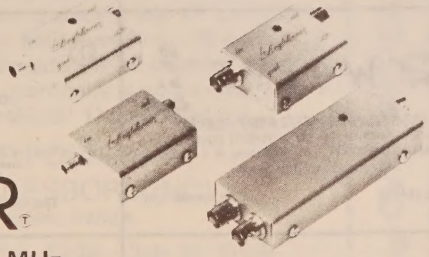
INTRODUCING OUR NEW AMP
MODEL 2M10-250P

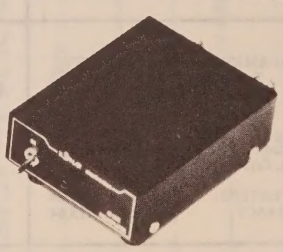




80 WATTS







LUNAR

28-50-144-220-432 MHz

*One Year Warranty—90 days on Power transistors

LOW NOISE FIGURE RECEIVING PREAMPLIFIERS

F9FT ANTENNAS • 432 YAGIS BY K2RIW • MICROWAVE MODULES • RIW POWER DIVIDERS

MAURY'S VHF-UHF

M. W. "Maury" McMahan (K4GMJ)

253 Providence Square
Greenville, South Carolina 29615

Phone: (803) 288-4671

Specializing in VHF-UHF 50-144-220-432-1296-2304 MHz Amateur Equipment

Standard Theatre Supply Company
GREENSBORO • CHARLOTTE
W4ACY
PHIL WICKER
Home 919-299-9187
125 Higgins Street
Greensboro, N. C. 27406
Phone 919-272-6165

Millar Electronics, Inc.
MANUFACTURERS REPRESENTATIVES
ELECTRONIC COMPONENTS
W4WYV GEORGE PEACOCK WB4SOL
PHONES
787-9564
787-9585
A.C. 919
NORTH HILLS OFF MALL RM 134
P.O. BOX 17173
RALEIGH, NORTH CAROLINA 27609

SUPERWELD
REG. U. S. PATENT OFFICE
A DIVISION OF PERKINS MOTOR PARTS, INC.
1107 S. GEORGE ST.
GOLDSBORO, N. C. 27530
Complete Machine Shop Service
H. W. PERKINS, JR. W4TUQ
PRESIDENT
PHONE 735-1662

Dictaphone
Larry Schwarz WA4RHY
Service Representative
Dictaphone Corporation
711 Executive Dr. Suite 301, Fayetteville, NC 28305
Telephone (919) 484-6176

HARRIS
COMMUNICATIONS AND INFORMATION HANDLING
WA4KKY
JIM MENEFEE
District Manager-Radio Sales
#55 Flint Ridge
Hillsborough, N. C. 27278
919/732-7980
HARRIS CORPORATION Broadcast Products Division
P. O. Box 4290, Quincy, Illinois 62301 217/222-8200

BURLINGTON ROOFING COMPANY, INC.
ROOFING, GUTTERING, SHEET METAL WORK
GEORGE J. APPLE WB4JPP
V.P.
PHONE 226-5756
BURLINGTON, N. C.

REALTOR®
JEFFERSON REALTY
520 W. Friendly Ave.
Greensboro, N. C. 27401
W. B. "CHICK" HOLLIDAY WA4NHC
President
Tel.: 275-5355
Res.: 294-0990

RUBBER STAMPS
3 LINES SPECIAL $2.35
REGULAR $5.00 VALUE
Add 25c For P.P. also include Sales Tax
A B C STAMP MFG. CO.
120 Noble Ave., N.E. Roanoke, Va. 24012

(919) 784-8833
Telcom Company
CB & HAM RADIOS
SALES & SERVICE
JOHNNY WOOD K4JEY
Manager
4349 KERNERSVILLE RD.
KERNERSVILLE, NC 27284

RALEIGH AMATEUR RADIO SOCIETY
P. O. Box 17124
Raleigh, NC 27609
Encouraging fun, public service and education with Ham Radio. RARS meets first Wednesday each month, Crabtree Mall.
RARS REPEATERS: 146.04 - 146.64
W4DW WR4ACF 222.04 - 223.64

W4PVI
DO IT in 4x4
TAR HEEL FOUR WHEEL DRIVE CENTER
DISTRIBUTORS OF OFF ROAD VEHICLE EQUIPMENT
2823 ROXBORO RD. • DURHAM, N. C. 27704
TELEPHONE 919/477-9811
GENE BEAVER HOME 919/688-9293

JOHN L. WASHBURN
Field Representative
WB4GGF
Suite 118, 2309 W. Cone Blvd., P.O. Box 13596
Greensboro, North Carolina 27405
Telephone: 919/282-1250
The Ohio Casualty Insurance Group

WEST ANTENNA SERVICE
RT. 6 BOX 529A
GREENSBORO, N. C. 27405
PHONE 621-9941
WB4RLO
ROHN TOWERS AND ACCESSORIES
POWER POLES AND POLE HARDWARE INSTALLED

ELECTRONIC SPECIALTIES & ENGRAVING
P. O. BOX 2545
ANDERSON, S.C. 29621
W4EJC
HERB AXSOM 803-225-4812

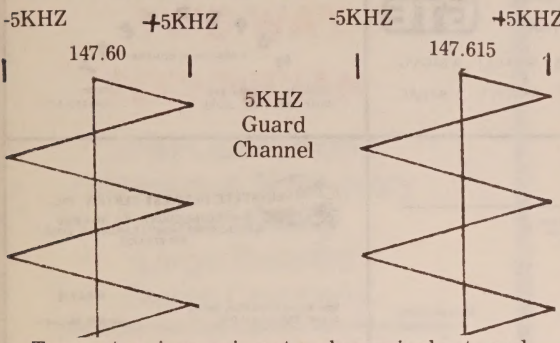
SPIRIT OF ROANOKE
WFIR RADIO 96
MELLOW WPVR STEREO 95
LEE McDANIEL
REGIONAL SALES REPRESENTATIVE
WB4QOJ
BOX 150
ROANOKE, VA. 24002
PHONE 345-1511
AREA CODE 703

channel 7 WITN
NBC studios at washington, n.c. transmitter at grifton television for eastern north carolina
Site of E N C Repeater
WR4ABP Grifton - 16/76
Located at 1300'

SAURATOWN MT.
(North of Winston Salem, N.C.)
223.28-224.88
WELCOMES YOU TO
CALL IN ANYTIME
W4RXG-K4MOB-AND THE GANG
COVERING 100 MILES IN ALL DIRECTIONS

Welcome to
W4LPL/REPEATER
"The Red Carpet Repeater"
Fayetteville, North Carolina
147.93/33
Proudly Serving our Community
and the best darn Hams in the world

Eliminating Adjacent Channel Interference



Two meters is growing at a phenominal rate and many new repeaters are being placed on 15KHZ splits as all 30 KHZ channels are used. An increasing problem is being voiced by many repeater owners - operators due to interference from adjacent channels. This may be caused by users who deviate more than -5 KHZ or outputs of repeaters deviating more than -5 KHZ. The established band plan only allows a 5 KHZ guard channel between repeater channels and we are to use narrow band FM (-5 KHZ deviation). There is no room for wide band deviation from transmitters or wide band receivers, particularly on repeaters. Lets cooperate on this problem! Thanks - K4ARO.

NEW CLUB FORMED IN NORTH WILKESBORO (NC)

-by Danny Walker, N4BEX

The Foothills Amateur Radio Club in North Wilkesboro, NC, held its charter meeting on April 3 with 12 members in attendance. The club, which was formed to serve Wilkes County and surrounding areas, has drafted a constitution and elected officers for the coming year. The officers are: Danny Walker, N4BEX, President; Larry Sloop, WB4UYY, Vice President; George Reeves, WD4BMG, Secretary-Treasurer; and Bob Staley, WB4UTF, Activities Manager.

At the meeting, the club voted to form a RACES Network for the area, and discussed having social events, among other things. Anyone in the area interested in joining our group may contact any of the above for further information.

DAFFYNITIONS

District Confusion—Easily diagnosed when W4 repeatedly gives his callsign to a DX station who's standing by for sixes.

CVRA ASSOCIATE MEMBERSHIP

GET A FRIEND TO JOIN!

RECEIVE THE JOURNAL FOR A YEAR

Send Me The Award Winning CVRA REPEATER JOURNAL,

CVRA ASSOCIATE MEMBERSHIP APPLICATION:

Name _____ Date _____

Address _____ Call: _____

City: _____ State: _____ Zip: _____

Phone: (____) _____ *Member of ARRL?* ___ *Yes* ___ *Life* ___ *No*

The Repeater I call "home" is: _____

Enclosed is: $_____ ($3.00 Per Year.)

Mail to:
CVRA
P.O.Box 3325
Burlington, N.C. 27215

J _____ R New _____ Renew _____

5-79

SUITE NO. 1
UNITED CENTER
3618 REYNOLDA RD. 27106

73's & 88's

TRI-BAND RADIO
"CB" "SSB" "HAM" EQUIPMENT
PHONE 924-1371

GENE WILLIAMS WA4STV 924-4333
JOHN BUMGARDNER 724-0326
CHARLES PENDERGRASS WA4SUB 945-3370

The Hams of
GENERAL TELEPHONE COMPANY
OF THE SOUTHEAST
Durham, NC
Support the CVRA
GTE

WA4WTX WA4HTZ WA4LAJ WB4GVG
WB4DVP WB4DVT WB4DVV WA4EAC

Joe Weber WB4OYW
WEBERCRAFT
SOUTH HIWAY 49
HARRISBURG, N.C.
John Yarbrough WB4ALA
HOME OF THE AMAZING
SUPER SEAT
"CUDDLED IN COMFORT"
Mail: Rt. 10, Box 444
Charlotte, N.C. 28213
Phone:
704/455-5015

Vickers
COMMUNICATIONS DIVISION
520 E. MAIN ST.
DURHAM, N.C. 27707
683-1597 — 688-6311
WB4TSM Alan

SHERWIN WILLIAMS
The Sherwin-Williams Company
103 Southgate Shopping Center
Boone, North Carolina 28607
264-9133
WB4DYD
Marcus Setzer
Store Manager

MID-STATE DELIVERY SERVICE, INC.
614 EUGENE COURT - P.O. BOX 4098
GREENSBORO, NORTH CAROLINA 27406
919-273-1923
Specializing in Next-Day Service
to over 300 points in N.C.
WB4VJE
Larry M. McLaurin

RUN YOUR BUSINESS CARD IN THE JOURNAL — $9.00 PER YEAR (IN ADVANCE)

REALTOR®
MLS
HAILEY REALTY
141 OAKLAND AVENUE
ROCK HILL, S.C. 29730
WA4QAT
C. FLOYD HAILEY
OFF. 803/328-1883
RES. 803/366-7986

Richard H. Bley N4UK
704/328-3939
Microcomputer Services
108-110 Arcade Bldg · Hickory, NC 28601

REALTOR®
MULTIPLE LISTING SERVICE
JIM McNAIRY,
WD4LFK
McNAIRY & ASSOCIATES
1001 BATTLEGROUND AVE.
GREENSBORO, N. C. 27408
OFFICE (919) 378-1564
RES. (919) 668-0468

The "We Can Do It" Printer

This Edition CVRA REPEATER JOURNAL
Typeset and Printed By

GTP
GOLDEN TRIANGLE PRINTING CO.

May we serve you with fine quality typesetting and printing? Our 14 employees want to assist you with sales brochures, booklets, mailers, flyers, or business printing. Call Ray Oskey or Bill Drake for free estimates. If it's printing we can do it!

Golden Triangle Printing Co
1006 N. Raleigh St. - Greensboro, N.C. - 273-8221

WANTED

TWO WAY

TECHNICIAN

2ND Class Phone
Experience Necessary
Good Salary
Large Benefits
Stable Company

TWO WAY RADIO

OF CAROLINA

Call - 372-3444
Write P.O. BOX 33776
Charlotte, N. C. 28208

HAMFESTS OFF AND RUNNING

Continued From Page 7

ARRL Convention will be held in Baton Rouge, Lousiana July 20-22.

In August we can look forward to the Winchester, Va. hamfest on the 5th. This well attended event is held at the Ruritan Park in Berryville about 15 miles East of Winchester. Lots of shade trees in the park. Home cooked food, last year, Barbeque chicken, cooked in the park. Other hamfests in August which we'll cover in the next Journal, are Fayetteville on the 18th and 19th, and Concord, a newcomer in N.C. on the 12th.

Hamfests are fun to attend. Its a great place to take the family, let the wife do some shopping, looking around, or just plain relax. You get a chance to do some buying, selling, swapping and rag-chewing with many old friends.

Perhaps we'll see you at one this year.

CHANGES TO REPEATER INDEX

If your club or repeater group wishes to make changes in your listing in the repeater index of the Journal, notify in writing your State District Director. He will see that the changes are made.

"AMATEUR ASSOCIATES"

- Antenna Towers and Accessories
- Antenna Rotors and Rotor Cable
- Copperweld Antenna Wire and Insulators
- RG 8/U and RG 8X Coax Cable—PL 259s

"Get A Quote From Us Before You Buy!"

Ham Cooper WB4SZZ — Jack Kenny WB4MCU
Telephone (919) 833-9672 Raleigh, N.C.

CVRA RECOGNIZED BAND PLANS

6 METER BANDPLAN

33 Repeater Channels

52.01 - 53.01
52.03 - 53.03
52.05 - 53.05
52.07 - 53.07
52.13 - 53.13
52.15 - 53.13
52.15 - 53.15
52.17 - 53.17
52.23 - 53.23
52.25 - 53.25
52.27 - 53.27
52.33 - 53.33
52.35 - 53.35
52.37 - 53.37
52.39 - 53.39
52.41 - 53.41
52.43 - 53.43
52.45 - 53.45
52.47 - 53.47
52.55 - 53.55
52.57 - 53.57
52.63 - 53.63
52.65 - 53.65
52.67 - 53.67
52.73 - 53.73
52.75 - 53.75
52.77 - 53.77
52.83 - 53.83
52.85 - 53.85
52.87 - 53.87
52.93 - 53.93
52.95 - 53.95
52.97 - 53.97
52.99 - 53.99

SIMPLEX
51.51
51.53 etc.
to 51.99
52.29
52.49
52.51
52.525

RADIO CONTROL
53.1
53.2
53.4
53.5
53.6
53.7
53.8

CVRA 2-METER BANDPLAN

Repeater Channels

144.51 - 145.11
144.53 - 145.13
144.55 - 145.15
144.57 - 145.17
144.59 - 145.19
144.61 - 145.21
144.63 - 145.23
144.65 - 145.25
144.67 - 145.27
144.69 - 145.29
144.71 - 145.31
144.73 - 145.33
144.75 - 145.35
144.77 - 145.37
144.79 - 145.39
144.81 - 145.41
144.83 - 145.43
144.85 - 145.45
144.87 - 145.47
144.89 - 145.49

146.010 - 146.610
146.025 - 146.625
146.040 - 146.640
146.055 - 146.655
146.070 - 146.670
146.085 - 146.685
146.100 - 146.700
146.115 - 146.715
146.130 - 146.730
146.145 - 146.745
146.160 - 146.760
146.175 - 146.775
146.190 - 146.790
146.205 - 146.805
146.220 - 146.820
146.235 - 146.835
146.250 - 146.850
146.265 - 146.865
146.280 - 146.880
146.295 - 146.895
146.310 -146.910
146.325 - 146.925
146.340 - 146.940
146.355 - 146.955
146.370 - 146.970
146.385 - 146.985
146.400 - 147.000
146.415 - 147.015
146.430 - 147.030
146.445 - 147.045

146.460 - 147.060
146.475 - 147.075
147.600 - 147.000
147.615 - 147.015
147.630 - 147.030
147.645 - 147.045
147.660 - 147.060
147.675 - 147.075
147.690 - 147.090
147.705 - 147.105
147.720 - 147.120
147.735 - 147.135
147.750 - 147.150
147.765 - 147.165
147.780 - 147.180
147.795 - 147.195
147.810 - 147.210
147.825 - 147.225
147.840 - 147.240
147.855 - 147.255
147.870 - 147.270
147.885 - 147.285
147.900 - 147.300
147.915 - 147.315
147.930 - 147.330
147.945 - 147.345
147.960 - 147.360
147.975 - 147.375
147.990 - 147.390

144.0 to 144.5 SSB
144.9 to 145.1 SSB
145.5 to 146.0 SSB

Satellite
145.85 to 145.975

SIMPLEX FM

146.49
146.52
146.55
146.58

147.42
147.45
147.48
147.51
147.54
147.57

CVRA 220 MHZ BANDPLAN

55 Repeater Channels

222.30 - 223.90
222.32 - 223.92
222.34 - 223.94
222.36 - 223.96
222.38 - 223.98

222.40 - 224.00
222.42 - 224.02
222.44 - 224.04
222.46 - 224.06
222.48 - 224.08

222.50 - 224.10
222.52 - 224.12
222.54 - 224.14
222.56 - 224.16
222.58 - 224.18

222.60 - 224.20
222.62 - 224.22
222.64 - 224.24
222.66 - 224.26
222.68 - 224.28

222.70 - 224.30
222.72 - 224.32
222.74 - 224.34
222.76 - 224.36
222.78 - 224.38

222.80 - 224.40
222.82 - 224.42
222.84 - 224.44
222.86 - 224.46
222.88 - 224.48

222.90 - 224.50
222.92 - 224.52
222.94 - 224.54
222.96 - 224.56
222.98 - 224.58

223.00 - 224.60
223.02 - 224.62
223.04 - 224.64
223.06 - 224.66
223.08 - 224.68

223.10 - 224.70
223.12 - 224.72
223.14 - 224.74
223.16 - 224.76
223.18 - 224.78

223.20 - 224.80
223.22 - 224.82

223.24 - 224.84
223.26 - 224.86
223.28 - 224.88

223.30 - 224.90
223.32 - 224.92
223.34 - 224.94
223.36 - 224.96
223.38 - 224.98

SIMPLEX
24 Channels

223.40
223.42
223.44
223.46
223.48
223.50
223.52
223.54
223.56
223.58
223.60
223.62
223.64
223.66
223.68
223.70
223.72
223.74
223.76
223.78
223.80
223.82
223.84
223.86
223.88

CVRA

calendar of coming events

The CVRA Journal will be glad to publish Events in your area taking place which are of interest to the entire area. Send information to CVRA Editor 1 month prior to Journal Publication date.

The following list was compiled with the gracious assistance of ARRL Roanoke Director, Phil Wicker, W4ACY. The list contains tentative dates for most hamfests.

1979 HAMFEST CALENDAR

MAY

6 ..... GASTONIA, N.C.
12-13 ..... COLUMBIA, S.C.
19-20 ..... DURHAM, N.C.
26-27 ..... KNOXVILLE, TN.
27 ..... ROANOKE, VA.

JUNE

3 ..... MANASSAS, VA.
16-17 ..... ATLANTA, GA.
31-Jul 1 ..... W. Va. State ARRL Conv.

JULY

20-22..... Nat'l ARRL Conv. BATON ROUGE, LA.
21 ..... CARY, N.C.
28-29 ..... CHARLESTON, S.C.
29 ..... BALTIMORE, MD.

AUG.

5..... WINCHESTER, VA.
12..... CONCORD, N.C.
18-19 ..... FAYETTEVILLE, N.C.

SEPT.

1 ..... CVRA Annual Meeting, SHELBY, N.C.
1-2 ..... SHELBY, N.C.
16..... AUGUSTA, GA.

OCTOBER

7..... ROCK HILL, S.C.
13 ..... ASHEVILLE, N.C.
14 ..... NEW BERN, N.C.
20-21 ..... NORFOLK, VA.

TECHNICAL TIP - Be wary when you decide to use a cigarette-liter plug for hooking up your rig. We have been told that some cars on the market have the polarity reversed. This could ruin your rig in short order if it is not protected.

FCC EXAMINATION SCHEDULE FOR FIFTH DISTRICT

CHARLOTTE, N.C. Jan. 10, 11 & July 11, 12
SALEM, VA. March 7, 8 & Sept. 5, 6
WILMINGTON, N.C., May 2, 3 & Nov. 7, 8

WINSTON-SALEM, N.C.

February 7-8	August 1-2
April 4-5	October 3-4
June 6-7	December 5-6

Persons wishing to take examinations at the designated cities should send a completed 610 form to the FCC Norfolk office at least 2 weeks prior to the examination date. The FCC will notify applicant by mail as to date, time and place and include a pass to admit person into examination room. All exams are by appointment only. You must bring your pass to get in.

Applicants with visual impairment or other disability must make prior arrangements with the FCC for exams.

The Norfolk office of FCC conducts RADIO OPERATOR EXAMS without appointment during these days: COMMERCIAL PHONE, Wednesday & Friday 9 a.m. to 12 noon. AMATEUR RADIO & TELEGRAPHY, Thursdays at 9 a.m.

GENERAL ELECTRIC

ATTENTION PE, PY, AND PR portable owners. I can do minor and major modifications and repairs to your units. Also GE pager repairs. Factory trained on GE personal products. FCC Licensed. For more information contact:

H. ALAN COPELAND WA4JOK
Rt. 1 Box 85
Belvidere, N.C. 27919
(919) 221-8410

CLASSIFIED ADVERTISING

If you have equipment you would like to swap, sell, buy or trade you're invited to send us your want ads. Mail them to our Sales Manager listed on page 1 of the Journal. Ads are not limited to Amateur Radio items.

CLASSIFIED AD RATE: Non-Commercial or Commercial. $1.75 per ad in advance of Publication. (Max 30 words any one ad)

Ads must be submitted 30 days prior to publication. The CVRA assumes no responsibility as to the accuracy of description of equipment or its condition.

WILSON-800 SYNTHESIZED 2-meter. Enjoy the smallest, lightest 12-watt unit available. Handy, too, as a 1-watt portable which operates with its own rechargeable batteries. Complete with batteries and touch-tone-speaker/mike. Ervin Jackson, 1835 Pinewood Circle. Charlotte,. N.C. 28211 (704) 366-9230. Price $290.00.

IMMACULATE PAIR! Hammarlund HQ-170A Receiver; HX-50A Transmitter (180W); $169.00 each or $300 for both. BINO COMMUNICATIONS, INC. (919) 292-8052.

G.E. VHF REPEATER. Model BO39TM6. 10-50 Watts low, 250 Watts High transmitter. BP30RMN6 Dual Receiver. Excellent condition. Sell for BEST OFFER. Stan Pope, 511 Washington, St., Cramerton, N.C. 28032. (704) 824-1883.

TERRIFIC SWAP AD SHEETS! Ham, antique radios; nostalgic entertainment, collectables! Nationwide since 1971. 10¢ a word. Subscribe, 24 issues-$7.50, get one ad free! Sample next 5 issues-$2.00. "ELECTRONICS TRADER", Box 73-RJ, Folly Beach, S.C. 29439.

220 MIDLAND Transceivers, Model 13-509 only $159.00. Crystals for any 220 mhz repeater $8.00/pair. Antennas base and mobile for 220. WILLIAMS RADIO SALES, Route 1, Box 806, Colfax, N.C. 27235. (919) 993-5881.

FOR SALE 200 Watt Wince Wind Generator with tower. Produce your own 12 VDC from the wind. Great for field day! Like new $375.00. Phone or write: Richard V. Greene, 2403 Revolan Court, Greensboro, N.C. 27407. (919) 299-6605.

SWAN 500C-MINT, 200 watt out; with both AC and DC supplies. $399.00 takes all. BINO COMMUNICATIONS, INC. (919) 292-8052.

Advertisers' index

	PAGE
Amateur Associates	45
Bicomm	13,35
Bob's Amateur Radio	16,17
Business Card Advertising	42,44
Charleston Hamfest	10
Classified Advertising	48
Copeland	47
CVRA Associate Membership Application	43
CVRA Advertising Rates	40
Durham Hamfest	15
Gastonia Hamfest	Ins. Bk. Cover
Georgetown Communications	34
G.I.S.M.O. Electronics	36
Golden Triangle Printing Co.	44
Hometronics	6
Jefferson Realty	8
Knoxville (Tenn.) Hamfest	18
Maury's VHF-UHF	41
Radio Communications of Roanoke	20
Richtronics	31
Two Way Radio of Carolina	45
Vickers Electronics	39
West Antenna Service	8,38
Williams Radio of North Carolina	4,5,27

MANUALS FOR MOTOROLA U44BBT-1000 450-470 Mhz. T-power mobiles. $2.00 each postpaid. Manuals are brand new. Lewis D. Collins, W1GXT, 10 Marshall Terrace, Wayland, Mass. 01778.

THE $3.00 GIFT Give a subscription to the REPEATER JOURNAL to a friend as a "Gift." Cut out application form in this Journal or write complete information and mail to CVRA, P.O. Box 3325, Burlington, N.C. 27215 with your check for $3.00 per year.

RECEIVERS! Hammarlund HQ-110 $99.00; Heath SB-301 $179.00. BINO COMMUNICATIONS, INC. (919) 292-8052.

FOR SALE . . . Heavy duty 50-foot tower, $200.00; Dentron Jr. Monitor, used once, $70.00; Yaesu FTV-650 6-Meter Transverter, $150.00; Heath HP-23B, $65.00. Steve Eigsti, K5SE, (919) 967-7642.

GONSET GSB-2 . . . 2-meter CW, SSB Transceiver; 15-watt out; VFO controlled. First $169.00 takes it. BINO COMMUNICATIONS, INC. (919) 292-8052.

FREE! CVRA Journal Repeater Index sheets for VA., NC., SC., TENN. Contact Lindsay, W4IZI or Wayne, K4MOB. Addresses in front of Journal. See us at hamfests for packages to distribute to your club. SASE Please for single copies.

GASTONIA AMATEUR RADIO SOCIETY
Third Annual

HAMFEST

Sunday, May 6, 1979
9:00a.m. - 4:00 P.M.
GASTONIA, N.C. - at - ASHBROOK HIGH SCHOOL

A *HAMFEST* for the family — — — — — Approved by the ARRL. Vendors please write early for Space confirmations.
FLEAMARKET SPACE: All you need. TABLES $5.00 per table. RAGCHEW space provided. Plenty of parking facilities. Tailgating Allowed with purchase of admissions ticket. Exhibitors may set-up 7:00 A.M. SUNDAY

MOTELS / RESTAURANTS

Holiday Inn	865-3421
Howard Johnson	864-9981
Ramada Inn	867-1821
Days Inn	867-0231
Royal Villa	739-2544
KOA	

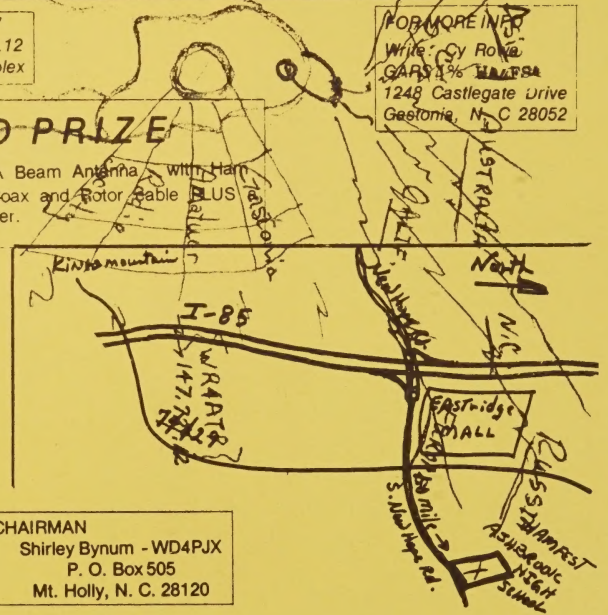
'TALK-IN'
147.72/147.12
146.52 Simplex

FOR MORE INFO
Write: Cy Rollins
GARS 1% HAMFEST
1248 Castlegate Drive
Gastonia, N. C 28052

GRAND PRIZE

SWAN 4-Element TB4HA Beam Antenna with Ham IV Rotor and 100 feet Coax and Rotor Cable PLUS Consolidated 50 foot Tower.

Need not be present to win GRAND PRIZE!!! Must be present to win HOURLY drawing prizes Drawing for Grand Prize 2:30 A.M.



HAMFEST CHAIRMAN
MIKE JACKSON - K4AYO
2568 Devon Street
Dallas, N. C. 28034
(704) 922-3593

REGISTRATION
TICKETS - $2.00 Per Ticket
or 3 for $5.00
(16 years and over)
Admission Ticket and Grand Prize the Same ticket
Many other DRAWINGS HOURLY

CO-CHAIRMAN
Shirley Bynum - WD4PJX
P. O. Box 505
Mt. Holly, N. C. 28120

CAROLINAS-VIRGINIA REPEATER ASSN.
Post Office Box 3325
Burlington, North Carolina 27215

BULK RATE
U. S. POSTAGE
PAID
BURLINGTON, N.C. 27215
PERMIT NO. 271

FORWARDING AND RETURN POSTAGE GUARANTEED
ADDRESS CORRECTION REQUESTED

THIRD CLASS MAIL

"To Serve . . . . ."

AL T. ROSS K4CAW
2404 SPRINGWOOD DR. 1287C
GREENSBORO, NC 27403

THE CAROLINAS-VIRGINIA REPEATER ASSOCIATION STATE DIRECTORS, VICE DIRECTORS AND ASSISTANTS

For Assistance in Repeater Coordination, Frequency Coordination, Changes in Repeaters, and Any other Assistance You May Require from the CVRA, Contact Your Local Director or His Assistant.

VIRGINIA

DIRECTOR
Carter Cogle, K4ARO
1667 Varina Avenue
Petersburg, Va. 23803
(804) 733-8411

VICE-DIRECTOR
Amos R. Rhames K4WQS
2830 Blairmont Dr.
Danville, Va. 24541
(804) 792-0443

ASST. DIR. (TIDEWATER)
Wally Burkette, WA4KXV
242 Raintree Road
Virginia Beach, Va. 23452
(804) 486-1555

ASST. DIR. (S.W. VA.)
Bob May, K4SE
Post Office Box 30
Jonesboro, Tenn. 37659
(615) 753-3662

ASST. DIR. (N. VA.)
Thomas Gooding K4LHB
206 West Maple Ave.
Sterling, Va. 22170
(703) 450-4708

NORTH CAROLINA

DIRECTOR
Ken Woodard WA4BVW
Route 2, Box 407
Canton, N.C. 28716
(704) 235-8354

VICE DIRECTOR
Ed (Buff) Buffington W4VGZ
2736 Woodbury Drive
Burlington, N.C. 27215
(919) 227-6356

ASST. DIR. (CENTRAL)
Larry H. Schwarz, WA4RHY
1752 Wellons Drive
Fayetteville, N.C. 28304
(919) 484-6590

SOUTH CAROLINA

DIRECTOR
Jack N. Watson, Jr. W4YPD
207 Lingstrom Lane
Columbia, S.C. 29210
(803) 772-7350

VICE DIRECTOR
Bob McCormick K4FRX
446 Leton Drive
Columbia, S.C. 29210
(803) 772-9681

ASST. DIR. (EASTERN)
Lennart Bjerken, WB4USY
P.O. Drawer 5858
Shaw Air Force Base, S.C.
(803) 481-2436

ASST. DIR. (COASTAL)
Thomas L. Martin, WB4PVL
212 Savannah Highway
Walterboro, S.C. 29488
(803) 538-5121